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## Joseph H. Howard, AL Director, Retires

On February 3, 1994, Joseph H. Howard retired after 11 years as Director of the National Agricultural Library and a 30-year career in federal government service.

Pamela André, NAL Associate Director for Automation, will be Acting NAL Director until Howard's



photo: D. Starr

Joseph H. Howard  
Retired NAL Director



photo: D. Starr

Pamela Q. J. André  
Acting NAL Director

replacement is selected.

André credits Howard with moving NAL toward the goal of becoming an "electronic library," a library whose collection can be accessed anywhere, at anytime and by anyone with a computer terminal.

"That is the vision toward which Joe has guided us during his years as NAL Director," André said. "He has left us a foundation of technology and networking expertise that will enable us to move more rapidly toward that goal."

"Internationally, Joe has guided the library into the forefront of activities aimed at strong cooperation with the agricultural libraries in many foreign countries," André said. "Through various agreements NAL is sharing and receiving agricultural information worldwide. Joe has been a pioneer and a world leader in the field of agricultural information. We hope we will be able to call on his expertise even as he moves into his active retirement years."

(See Howard, page 2, column 1)

## NAL Commits to 'Electronic Library' Goal

On January 1, 1995, the National Agricultural Library will take a major step in its commitment to become an *electronic library*. "On that date, electronic information becomes the *preferred medium* for library materials in an all-out push to make NAL's services and its collection available in various electronic formats worldwide," said Pamela André, acting NAL Director.

André indicated that NAL's ultimate goal is to be "truly a library without walls, where our magnificent collection can be accessed by computer by anyone, anywhere, and at anytime." She stated that NAL is making this commitment because of its belief that "the current paper-based information delivery system is inadequate to keep pace with the needs of the modern agriculturalist."

The *electronic library* goal was set in an *Electronic Information Initiative* – Phase I undertaken by NAL as part of a strategic plan to guide NAL operations into the next century. The overall purpose of the initiative is to research, plan, and implement a systematic program of managing data in electronic form.

“Phase I was a consideration of the issues associated with NAL’s ability to manage information created and stored electronically,” André stated. “The final report recommends actions NAL must take in order to provide full electronic access to information in the increasingly networked agricultural community.”

André said NAL set the January 1, 1995, goal in a *statement of commitment* contained in the *Phase 1 Final Report*. In part, the statement says, “Increasingly, information is produced in digitized form, and with recent telecommunications innovations and the Internet, the resources available to the computer literate researcher are expanding exponentially....

"[Consequently] NAL is taking the initiative in a systematic program of managing data in electronic form and establishing strategies for collecting, storing, and distributing U.S. agricultural information in electronic form."

The statement ends, "To demonstrate its commitment to meeting the challenges of becoming an 'electronic library,' on January 1, 1995, the National Agricultural Library will designate **(See Electronic Library, page 2, column 3)**

### Additional Features in This Issue:

Cornell Is Internet Site for USDA Statistical Data, pp. 6-7  
USAIN Conference Report, pp. 12-23

Highlights of Recent NAL Activities, pp. 24-37

See additional contents on the last page of this issue of *ALIN*.



(Howard, from page 1)

Prior to being named NAL Director in 1983, Howard held a number of positions of increasing responsibility at the Library of Congress (LC), completing his LC service as the Assistant Librarian for Processing Services from 1976-1983.

He also was Chief of the Cataloging Department for Washington University Libraries in St. Louis, as well as Associate Director of Public Services for the University of Colorado Libraries. From 1963 to 1965, he was a Peace Corps volunteer at the University of Malaya Library and Malayan Teachers College. Howard is a U.S. Army veteran.

A native of Olustee, Oklahoma, Howard received his bachelors and masters degrees from the University of Oklahoma. In 1979, he was awarded the University of Oklahoma Library School Alumni Award for Outstanding Contributions to Librarianship and in 1985, the Melvil Dewey Medal from the American Library Association for creative professional achievement in librarianship. Howard received the U.S. Department of Agriculture's Superior Service Award in 1988 for his "leadership in the development, application, and transfer of advanced information technologies resulting in significant program benefits for USDA agencies and users of NAL services worldwide."

Howard is a member of the American Library Association (ALA) and serves on various ALA committees. Also, he was a member of the Board of Regents of the National Library of Medicine, the General Administration Board of the USDA Graduate School; and the Joint Council on Food and Agricultural Sciences.

In 1990, Howard was elected to a five-year term as the President of the International Association of Agricultural Information Specialists (IAALD).

— Brian Norris

See also pages 38-41, and 48 for photographs of Joseph Howard's retirement ceremony and reception.

## André Named Acting NAL Director

Pamela Q.J. André, who has served in various library management positions with the federal government over a 25-year career, has been named Acting Director of the National Agricultural Library, replacing Joseph H. Howard, who retired on February 3, 1994.

André had been NAL's Associate Director for Automation since 1984. During this time she guided NAL's efforts to apply electronic technology to library operations. In particular, she was instrumental in the success of the National Agricultural Text Digitizing Program, in which selected portions of the NAL collection are placed on compact discs and distributed to land-grant university libraries nationwide. She also worked to make NAL services and products available over the Internet.

"As the Associate Director for Automation, Pam has demonstrated her management abilities," said Dean Plowman, USDA's Acting Assistant Secretary, Science and Education, "We are confident that she will serve admirably as Acting Director of NAL."

Prior to joining NAL, André held a variety of positions at the Library of Congress (LC). As a computer systems analyst, she worked on the development of LC's bibliographic computer system. She was later the Assistant Chief of the MARC Editorial Division. In 1982, she was named to the management team for the LC Optical Disk Pilot Project.

She has served on the editorial boards of several library-related publications and is a member of the American Library Association and the Library of Congress Network Advisory Committee.

André has a master's degree in library science from the University of Maryland and a bachelor of arts from the University of New Hampshire. Her articles on library automation have appeared in numerous publications and she is a popular speaker on the uses of new electronic technologies in libraries.

— Brian Norris

(Electronic Library, from page 1)

electronic information the preferred medium."

Other steps NAL will take to achieve its electronic library goal are: tie in to electronic networks worldwide to provide *seamless access to information*; shift and add resources to acquire, process, and make available electronic data; work closely with other world agencies and libraries to emphasize electronic information; and convert its own publications from print to electronic media.

"NAL cannot afford to ignore the flood of electronic advances taking place that we can use to serve our users more effectively," André said. "With this announcement we have committed ourselves to mastering information technology, to the benefit of U.S. and world agriculture."

Details of the NAL effort are contained in *The Electronic Information Initiative: Phase I Final Report: A Key Success Factor in the NAL Strategic Plan*. Copies of the report are available via anonymous FTP at:

`cliff.nalusda.gov`

in the directory:

`/pub/elec.init`

as filename:

`eii-rpt.txt`

Readers may also obtain a copy by sending a blank formatted 3.5" diskette to:

*Document Delivery Services Branch  
Attn: Electronic Initiative Diskettes  
Room 300*

*National Agricultural Library  
10301 Baltimore Boulevard  
Beltsville, MD 20705-2351*

For additional information contact Carol Ditzler at:

*Telephone: (301) 504-6503*

*TTY: (301) 504-6856*

*FAX: (301) 504-5675;*

*Internet: cditzler@nalusda.gov*

Or write to:

*Carol Ditzler, Head  
Document Delivery Services Branch  
Room 300  
National Agricultural Library  
10301 Baltimore Boulevard  
Beltsville, MD 20705-2351*

— Brian Norris

The following is taken from the "Executive Summary" of *The Electronic Information Initiative: Phase 1 Final Report: A Key Success Factor in the NAL Strategic Plan* plus paragraphs from the memorandum conveying the report to the NAL Director.

## Phase 1 of NAL'S Electronic Information Initiative Completed

To continue the National Agricultural Library's national leadership role in the production, management and dissemination of agricultural information, Joseph H. Howard, NAL Director [retired February 1994], launched the Electronic Information Initiative in December 1992. The purpose of the Initiative is to research, plan, and implement a systematic program of managing data in electronic form. *Phase 1 of the initiative consisted of an examination of the issues associated with the library's ability to manage electronically created and stored information.*

A steering committee, consisting of two branch heads and the library systems coordinator, was charged with enlisting a broad-based group of NAL staff to work on this project. Three committees were established and charged to proceed with a *practical* effort to "provide recommendations for changing policies and procedures related to the acquisition, processing, access, dissemination, collection maintenance, and preservation" of:

- Electronic journals;
- Original texts and reproductions of print documents disseminated on CD-ROM; and
- Electronic research data bases.

Two additional committees were

## The Electronic Information Initiative Statement of Commitment

The world of information management is changing daily. The current paper-based information delivery system is inadequate to keep pace with the needs of the modern agriculturalist. Increasingly, information is produced in digitized form, and with recent telecommunications innovations and the Internet, the resources available to the computer literate researcher are expanding exponentially. The length of time expended for traditional publication, procurement, physical handling, indexing, and document delivery processes is no longer acceptable. Transition from the traditional print collection to the "electronic library" will necessitate a shift from a production mode to a facilitator mode of service.

The National Agricultural Library has a responsibility to provide leadership to the increasingly networked agricultural information community. In its role as a national library, NAL has an obligation to manage information, promote standardized formats, repackage essential information for mass distribution, and mediate electronic access to information irrespective of where the data reside. In addition, NAL is an intermediary with a large client-base that can facilitate USDA research initiatives and enhance the dissemination of these research results to the world.

As knowledge takes on new forms, library staff must learn new skills and develop new storage/dissemination models and systems suitable to meet the requirements of the electronic information age. The National Agricultural Library is creating a planning document for a systematic program of managing data in electronic form and establishing strategies for collecting, storing, and distributing U.S. agricultural information in electronic form.

To demonstrate its commitment to meet the challenges of becoming an "electronic library," on January 1, 1995, the *National Agricultural Library will designate electronic information the preferred medium.*

charged with examining and documenting:

- The impact of converting NAL print publications to electronic format; and
- The preservation issues associated with optical/electronic media (CD-ROM).

The committees gathered policy and procedural statements, identified background material, reviewed the current literature, brainstormed to identify questions which needed answers and scenarios they might face in the future, proposed answers to as many questions as possible, and, finally, made both broad and specific *recommendations for actions* to be taken by the National Agricultural Library. The most important recommendation is that the *Electronic Information Initiative Statement of Commitment* be approved. Committing to become an "electronic library"

will strongly position NAL to meet the challenges of the transition from providing information services using a traditional print collection to providing full electronic access to information.

In November 1993, Carol Ditzler, Caroline Early, and Claudia Weston submitted the *Phase 1 Final Report, The Electronic Information Initiative: A Key Success Factor in the NAL Strategic Plan* to the NAL director and senior managers. In February 1994 the report was ready for announcement to NAL's public, and the *Electronic Information Initiative Statement of Commitment* had been adopted by the National Agricultural Library as official policy.

Besides the recommendations, included in the report are sections which address two additional key components of the *Electronic Information Initiative*, namely, the "Evaluation Study: Developing Structures for Managing Electronic Information in Agriculture," and a proposal to make



AGRICOLA available online at NAL and accessible via the Internet. The report does not address the specific costs associated with the recommended actions; instead, the recommendations are arranged according to a suggested timeframe. Flexibility has been designed into the recommendations in order to allow implementation of as many specific actions as possible.

The report is the result of countless hours of effort by NAL staff from all branches, levels of responsibility, and areas of expertise. When the project was started in December 1992, only half of the committee members had electronic mail accounts, many had never heard of "gophers," and few had seen what an electronic journal issue

looks like on a computer monitor. All of these wonders are now "old hat" to the committee members, a core group of individuals who are ready, willing, and able to meet the challenges presented by electronic information access and handling.

The report should not be considered the "end of the story," rather, the beginning. Many questions remain unanswered. The experience gained by committee members is invaluable in the identification of the problems and solutions of electronic formats. The issuance of the report teamed with the advocacy of the NAL director will create the momentum needed to meet the challenges of NAL's becoming an electronic library.

promote standardized formats, repackage essential information for mass distribution, and mediate access electronically to information irrespective of where the data reside. In addition, NAL is an institution with a large user base capable of facilitating USDA research initiatives and enhancing the dissemination of the research results to the world.

With the implementation of the Electronic Information Initiative (EII), NAL will be established as the central node in an electronic system, providing agricultural information by directly linking users with the information producers. Further, this approach complies fully with the spirit and intention of the revised Circular A-130. The thrust of the initiative is to implement a program aimed at achieving an effective transition from providing information services using a traditional, print collection to achieving the full capacity to provide electronic access to information via the Internet as part of the National Research and Education Network (NREN).

The following is the "Introduction" to the report titled: *The Electronic Information Initiative: Phase 1 Final Report: A Key Success Factor in the NAL Strategic Plan*.

## Electronic Information Initiative Introduction

NAL's current paper-based information document delivery system which furnishes articles cited and indexed in AGRICOLA and other databases, is becoming increasingly inadequate to keep pace with the requirements and computer capabilities of the typical laboratory scientist or policy maker. The spate of information being produced in digital form, coupled with recent telecommunications innovations and the dominance of the Internet, have combined vastly to increase the resources available to agricultural researchers and scientists. Compared to the virtually instant electronic transmission of information via the Internet, the considerable time required to provide information through the traditional methods — involving publication, procurement, physical handling, and document delivery of paper products — is rapidly rendering the traditional model obsolete. Thus, NAL's need for transition to this already emerging reality termed "library without walls" or "electronic library" dictates an immediate shift from providing information services based on printed materials to methods in which NAL will facilitate users in obtaining information electronically.

Core to all of the NAL programs has been the creation and advancement of the AGRICOLA [AGRICOLA (AGRICultural OnLine Access)] database, which since 1970 has been the principal source of agricultural information for practitioners and researchers worldwide. With over three million records, AGRICOLA citations and indexing records correspond to the most important agricultural publications from around the world. It is not possible to overstate the importance of the information contained in the AGRICOLA database to the scientists and researchers of ARS, USDA, the land-grant universities, and other institutions nationwide.

As a national library, NAL is charged with the duty to manage information,

The EII will create the infrastructure necessary to ensure that NAL will have the capacity to function in this newly created environment, in which the instantaneous transmission of information worldwide is fast evolving as the standard. The necessary infrastructure will include the design and installation of an internal network fully compatible with the Internet. Library users will be provided with multiple use workstations with the capability to access and process data in a wide variety of electronic formats. Increased computer storage will be acquired to make USDA-produced data as well as all agricultural data available on the Internet. A computer system within NAL will be developed to provide access to critical databases (e.g., AGRICOLA, genome databases, et al.) for use by ARS and USDA patrons, other Federal agencies, the land-grant institutions, farmers, ranchers, consumers, and other members of the general public. Primary connectivity will be achieved via the Internet as part of NREN. Extensive, intensive training in the use of new technologies related to this project will be necessary.



The following list is from *The Electronic Information Initiative: Phase 1 Final Report: A Key Success Factor in the NAL Strategic Plan*.

## Summary Recommendations

### **I. Adopt The Electronic Information Initiative vision statement.**

A. Establish it as one of the driving forces in budgeting, decision making, allocation of staff, setting priorities, etc., throughout the library.

B. Widely publicize it throughout NAL, USDA, and the land-grant and world-wide agricultural communities.

### **II. Provide NAL staff and patrons with state-of-the-art electronic access to electronic information.**

A. Make information available via the Internet, NALNET, a CD-ROM Network, etc., using WAIS, Gopher, Veronica, etc.

B. Implement networking as the keystone to seamless access to information.

III. Add staff and funds to acquire, process, and make available electronic data.

IV. Make AGRICOLA available online at NAL.

V. Reallocate for FY 94, a portion of the NAL budget and each branch budget which must be used to move toward implementing the *Electronic Information Initiative Statement of Commitment*, until funds become available in FY 95.

VI. Establish a permanent Steering Committee on Electronic Information Issues to:

A. Create a plan for implementing the recommendations in this report.

B. Keep the initiative on track and moving forward and serve as consultants to all NAL managers regarding electronic issues.

C. Keep abreast of the changing technologies and their potential applications; and:

D. Appoint three branch heads to the committee.

VII. Establish cooperative efforts with other interested agencies and libraries to:

A. Meet its obligation as a national library to manage information,

promote standardized formats, repackage essential information for mass distribution, and mediate electronically access to information irrespective of where the data reside.

B. Advise USDA regarding publication standards (i.e., SGML).

C. Avoid duplication of effort.

D. Minimize costs.

E. Increase institutional influence on a variety of issues including licensing, copyright, and other joint concerns.

F. Implement a preservation/archiving plan.

### **VIII. Establish a variety of permanent and temporary committees to continue the work of the five committees:**

A. **Electronic Media Collection Committee** (permanent, broad-based, to approve the selection and acquisition of electronic media, recommend weeding or retention of comparable print titles, establish storage, leasing and processing policies and procedures, and assign processing priority and preservation status to each electronic format title).

B. **Committee to investigate use of SGML to produce and acquire publications** (ad-hoc, to determine the software NAL should use to produce its publications using SGML).

C. **Preservation Committee** (permanent, broad-based, to continue to study and evaluate preservation issues, keep abreast of both new technologies and the National Preservation Program for Agricultural Literature, and develop a program for monitoring and refreshing digital data, etc.).

D. **Standards Committee** (permanent, broad-based, to establish standards for equipment and internal electronic media production).

### **IX. Review and revise policy statements and operating procedures (both internal and external) to:**

A. Reflect NAL's preference for the electronic version over print or other versions.

B. Require USDA to deposit copies of electronic documents, databases and documentation at the NAL and to report publication of electronic media including electronic journals and newsletters (similar to

the current requirement to deposit copies of print products).

C. Review and revise all NAL operating procedures, document the changes, and distribute the revisions widely.

X. Establish, equip, and staff an electronic media center for access to electronic media.

### **XI. Establish a library-wide electronic information training program to include:**

A. Formal and informal training for all NAL staff.

B. Continuing efforts to make staff and patrons aware of the latest developments in information provision systems and all aspects of electronic media, the electronic library, etc.

C. New technology seminars, etc., open to all NAL staff.

XII. Provide for the expertise in the library of someone who can advise NAL regarding licensing, copyright, and patents.

XIII. Convert the NAL print publications program to electronic media.

XIV. As part of the requirement to provide for the archival storage of USDA and NAL publications, establish a separate, climate controlled, secure location to house and service the archival copies of all electronic media.

XV. Develop and enhance policies, procedures and practices which facilitate the preservation of electronic media as part of the NAL preservation plan.

A. Design and implement a disaster plan for NAL.

B. Develop and implement practices that enhance the security of the electronic collection.

C. Immediately implement short range storage and use practices such as caddies that will prolong the lifespan of electronic media and protect them.

D. Develop, support, and use production standards for electronic media that will permit preservation and access well into the future.

XVI. Incorporate the work of these committees into NAL's strategic planning efforts.

# Cornell Is Internet Site for USDA Statistical Data

by Oya Y. Rieger  
Numeric Files Librarian  
Mann Library, Cornell University

A cooperative arrangement between the United States Department of Agriculture and Cornell University makes it easy to find current information about the U.S. and world agriculture and rural development.

Cornell's Albert R. Mann Library is the host for data sets collected by the USDA's Economic Research Service (ERS) and the National Agricultural Statistics Service (NASS).

Providing quick and timely access to agricultural statistics, the system includes more than 140 agricultural data sets, most in Lotus 1-2-3 (.wk1) format. The data sets contain information on topics such as:

- worldwide textile fiber production
- farm production expenses
- European Community wheat supply
- milk and dairy product sales
- food spending in American households
- U.S. meat supply and consumption
- fertilizer use
- ozone records for the Northeast
- ...and many more

The statistics can be accessed through three Internet protocols:

Gopher, Telnet, and File Transfer Protocol (FTP). Gopher access is highly recommended. Saving files is easiest when Gopher is used.

To connect, search, and display the files on your workstation, you will need:

- a computer
- an Internet connection
- Gopher, Telnet, or FTP software
- software to read and analyze the data sets, such as Excell or Lotus 1-2-3

The data are public domain and access is free and open to all. The system is available around the clock, seven days a week.

## Searching the USDA Economics and Statistics System

As shown in Figure 1, the data sets

### Access Addresses

- Gopher (recommended access method)

Host = usda.mannlib.cornell.edu  
Port Number = 70

- Telnet

Host = usda.mannlib.cornell.edu  
User ID = usda <lower case>  
Use a Telnet software capable of accepting file transfer (FTP)

- FTP

Host = usda.mannlib.cornell.edu  
User ID = anonymous  
Password = <your e-mail address> (optional)

After logging in, change the directory with the following command:

cd usda

are organized into eleven broad subject categories, which parallel the subject scheme used in the ERS/NASS Electronic Data Products catalog. After choosing a subject category, you will be prompted with a list of titles (Figure 2). Each data set is composed of a README file and several tables (files). The README files contain information on tables included in the data set and the name and address of the data specialist who compiled the data set. They are in text (ASCII) format and can be opened and read to find the section title and the table number for the data set you are searching. As illustrated in Figures 3 and 4, tables often are organized within sections.

The majority of the data files are in binary format (Lotus 1-2-3 files); they cannot be read on the screen. You need to save them on your own machine, and retrieve them using a Lotus 1-2-3 compatible spreadsheet package. In Figure 5, table04.wk1 from the National Financial Summary is opened using Microsoft Excel.

The "INDEX to README Files" on the main menu allows the keyword search of the readme files accompanying the data sets to locate a certain data set or a specific table.

### Gopher Software

There is public domain Gopher software available for many platforms. Gopher clients may be retrieved through anonymous FTP to [boombox.micro.umn.edu](http://boombox.micro.umn.edu) in the `/pub/gopher` directory.

### User Support

The main menu features "User Guides," which provide assistance in locating and transferring data. You may direct your questions about the access methods (Gopher, Telnet, FTP) and comments and suggestions for system improvement to:

Oya Y. Rieger  
Numeric Files Librarian  
Albert R. Mann Library  
Cornell University  
Ithaca, NY 14853-4301

Phone: (607) 255-7960  
E-mail: [oyr1@cornell.edu](mailto:oyr1@cornell.edu)



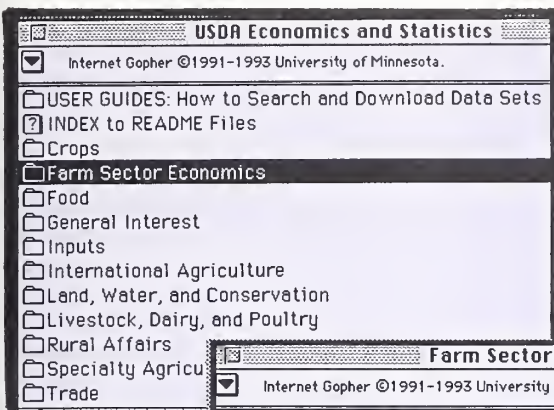


Figure 1

Questions concerning the development, use, or interpretation of data sets should be addressed to the subject-area data specialist identified in the README file. Questions about the system's content can be addressed to:

*Data Management Staff  
Economic Research Service  
Room 1212  
1301 NY Ave., NW  
Washington, DC 20005-4788*

*Phone: (202) 219-0012  
E-mail: jimh@ers.bitnet*

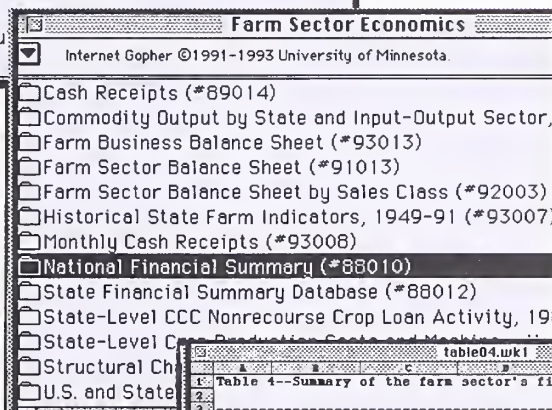


Figure 2

table04.wk1						
Table 4--Summary of the farm sector's financial status (in 198						
Year	Number of farms 2/	Net farm income	Returns to operators	Net cash income	Net cash flow	
1,000 ..... Billion Dollars						
1959	4097	41.9	39.3	48.9	41.7	
1960	3963	43.1	40.4	49.2	40.8	
1961	3825	45.5	42.8	52.0	48.3	
1962	3692	45.0	42.3	51.1	49.4	
1963	3572	43.3	40.4	49.9	48.2	
1964	3457	37.9	35.0	50.4	47.7	
1965	3356	45.4	42.6	51.7	52.0	
1966	3257	47.5	44.5	58.0	55.7	
1967	3162	40.7	37.6	49.7	43.7	
1968	3071	38.9	35.7	50.2	43.1	
1969	3000	42.9	39.7	54.5	49.8	
1970	2949	40.9	37.5	52.3	45.8	
1971	2902	40.6	37.1	48.7	48.4	
1972	2860	50.1	46.6	59.7	63.1	

Figure 5

Figure 3

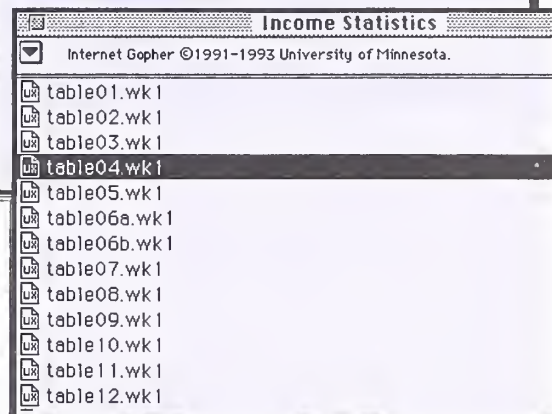
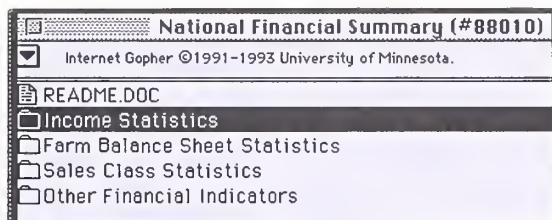


Figure 4

## Rieger Manages Statistical Materials

Oya Y. Rieger, author of the article "Cornell Is Internet Site for USDA Statistical Data," has been the Numeric Files Librarian at Mann Library, Cornell University, since September 1991. In addition to her responsibilities as a reference librarian, she manages the statistical files collection, and assists and instructs patrons in the use of electronic data files. She also participates in research and development projects involving accessing, retrieving, and managing electronic information. She has a B.S. in Economics (1983) and an M.P.A. in Public Administration (1985). She worked as a cataloger for several years before earning her M.S. in Library and Information Science at Columbia University (1991).

Oya Y. Rieger (standing) and graduate student Su-Mei Yen examine a graphical display of U.S. Census data for New York during a workshop offered by Mann Library.

photo by Charles Harrington  
Cornell University Photography





## Signing the Classification Scheme Jointly Prepared for the Agricultural Thesauri

### A Further Step Towards the Unified Agricultural Thesaurus (UAT)

A meeting on the AGRIRES project was held at the Zentralstelle für Agrardokumentation und -information (ZADI) in Bonn, Germany, on July 15-16, 1993. The meeting pursued the work initiated in the meeting of June 1991 (reported in *ALIN*, Vol. 17, No. 9).

Eckehard König, ZADI, opened the meeting with an overview of the progress in the AGRIRES Project which is sponsored by the EC Commission. The aim of the project is to develop an expert system which will assist retrieval from agricultural databases, setting up an optimal search profile. The system will draw on knowledge bases including thesauri, thesaurus classifications, and database classifications.

The joint preparation of a uniform classification scheme for both agricultural thesauri, AGROVOC and CAB Thesaurus, was the substantial task of the project.

Stella Dextre Clarke, CAB International (CABI), reported on the progress of operations toward the uniform classification. Meetings of the project parties (CABI, NAL, and FAO) contributing to the classification were held at intervals, and between the meetings, draft schedules were exchanged for comments. The classification was completed in time to be signed by all the participants prior to the AGRIRES Meeting in July 1993. Thus another step has been taken towards the UAT. For the AGRIRES Project, the incorporation of all the descriptors contained in the two thesauri into the common classification is needed. The work on the CAB Thesaurus has been finished meanwhile, and the incorporation of the AGROVOC descriptors is scheduled to be concluded in July 1994.

Pamela André, National Agricultural Library (NAL), reported the results of a meeting held at CABI in March 1992 at which two UAT working groups were established. The Technical Working Group was given responsibility for advancing the Thesaurus development work. On another level the Policy Group was made responsible for guiding the project and reviewing progress. Subsequently, the International Development Research Centre (IDRC) agreed to work with the UAT participants to provide a Thesaurus Management Software incorporating templates specifically tailored to the needs of the UAT. The availability of software to handle features such as the classified schedules will greatly facilitate the work already

under way.

Among other reports at the AGRIRES Meeting were one by PUDOC-DLO on the local database system and another by the Institut für Landwirtschaftliche Betriebslehre (ILB) on the AGRIRES expert system prototype.

—ZADI

Participants in the AGRIRES Meeting:

Pamela Q.J. André, NAL  
Hugo Besemer, PUDOC-DLO  
Stella G. Dextre Clarke, CABI  
Torben Friis, DataCentralen (DC)  
Ellen den Hoedt, PUDOC-DLO  
Eckehard König, ZADI  
Abraham Lebowitz, Food and Agriculture Organization of the United Nations (FAO)  
Annette Robinson, International Food Information Service (IFIS)  
Gerhard Schiefer, ILB  
Helga Schmid, FAO  
Jürgen Siemer, ILB  
Eberhard Stage, ZADI  
Phyllis Starkey, Agricultural and Food Research Council (AFRC)  
Ute Winkelmann, ZADI



(L-R) Pamela André, Stella Dextre Clarke, and Abe Lebowitz sign the agreement on the classification scheme for the UAT.



## NAL Trains ENAL Staff

by Ellen Pletsch  
Acquisitions/Serials Branch, NAL

On October 12, four staff members from the Egyptian National Agricultural Library (ENAL) arrived at NAL to spend six weeks selecting a basic collection for their new library and receiving training in acquisitions processes in the Acquisitions and Serials Branch.

The staff members, Mrs. Wafaa Thabit, Ms. Magda Nagui, Ms. Hend El-Kashif, and Ms. Dalia Metawea, arrived with some selections already made and spent all of their time during October selecting additional serials, reference materials, and monographs. Selection sources used were NAL's list of purchased serials, lists of materials in NAL's reference collection, 10,000 bibliographic slips generated by running an altered version of NAL's approval plan profile against Blackwell North America's database, *Books in Print Plus*, EPIC, and state publications catalogs.

In addition to working with ENAL

staff on materials selection, Acquisitions and Serials Branch staff communicated with vendors to find out about services available to ENAL and worked with staff at FEDLINK to coordinate efforts. The result of all these efforts was that one thousand journals and approximately 8,000 monographs were selected for the ENAL collection, including reference materials and CD ROM products.

Acquisitions training began in November, after substantial work on selection was completed. During our final three weeks of work with ENAL staff, three staff members, Magda Nagui, Hend Al-Kashif, and Dalia Metawea, received training in acquisitions and serials processing and one, Wafaa Thabit, received training in reference work and CD-ROM searching from the Reference staff. The Acquisitions technicians who trained ENAL staff and provided help with computer files were Lena Garner, Paul DeAnna, Veronica Perkins, Judi Winesdorfer, Stacey Cole, and Sandy Boone.

Additional groups of ENAL staff members will visit NAL later in 1994 to receive training in reference, document delivery, microcomputer use, CD-ROM production, and cataloging.

## NAL Budget Update

The National Agricultural Library's fiscal year 1994 appropriation for salaries and expenses is \$18,155,000, which is an increase of \$440,000 over the fiscal year 1993 budget. This increase is being used to meet both pay costs and the rising costs of library programs and services.

The library's fiscal year 1995 budget request as submitted by the President to Congress includes increases to effect a transition from providing information services based on printed materials to producing, managing, disseminating, preserving, and storing agricultural information in electronic formats. The fiscal year 1995 proposal also includes increases to improve library services, including collection development and document delivery. The salaries and expenses program total for the National Agricultural Library is \$19,620,000. This is an increase of \$1,465,000 over the fiscal year 1994 budget appropriation of \$18,155,000.

—Marlene Taylor



photo: J. Swab

(L-R) Ms. Magda Nagui, Ms. Dalia Metawea, Ms. Hend El-Kashif, and Mrs. Wafaa Thabit of the Egyptian National Agricultural Library.

## NAL Sponsors International Workshop on Agricultural Information\*

Representatives from agricultural organizations in Latin American and Caribbean countries joined with personnel from the National Agricultural Library January 24-28 in Washington, D.C. and Beltsville, Maryland, for an intensive workshop on "agricultural information transfer and networking."

Joseph H. Howard, NAL Director, stated that the four days of meetings addressed ways "to improve and strengthen the sharing of agricultural information between the United States and countries represented at the workshop."

"In agriculture, as in all fields, information is key to progress," Howard said. "By sharing research results and new farming techniques between countries, the world as a whole stands to benefit with increased food produc-

tion and less hunger. At the workshop we discussed and came up with methods for routinely exchanging this information."

Countries represented at the workshop were Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Mexico, Nicaragua, Paraguay, Peru, Trinidad/Tobago, and Venezuela. Joining NAL and the foreign officials were representatives from U.S. organizations, private and public, that work with agricultural information. Canadian and British agricultural information specialists also attended.

"By the end of the workshop we had produced an outline for a comprehensive regional plan for agricultural infrastructure development," Howard said. "We want this plan to improve national systems and enhance regional and international cooperation, communications and coordination. The plan should overcome technological isolation and develop structures that can provide cost-effective access to information."

Howard said that planning during the workshop focused on agricultural research and extension information

transfer and networking to support "national economic development and promote capacity building in the agricultural sector."

With NAL, other sponsors of the workshop were the Inter-American Development Bank, the Associates of the National Agricultural Library, the Inter-American Association of Agricultural Librarians and Documentalists, and the U.S. Agricultural Information Network.

For additional information contact Maria Pisa at:

(301) 504-6780,

TTY: (301) 504-6856

Fax: (301) 504-7042

Internet: mpisa@nalusda.gov

or write to:

Maria Pisa

Associate Director for Policy and Planning

National Agricultural Library, Room 200

10301 Baltimore Boulevard  
Beltsville, MD 20705-2351

\*NOTE: ALIN anticipates publishing a report on this meeting in a future issue.

— Brian Norris



### New Publications of Note

## 1994 List of Journals Indexed in AGRICOLA Available

The 1994 edition of the *List of Journals Indexed in AGRICOLA* (LJI) is now available from the National Agricultural Library. AGRICOLA (AGRICultural OnLine Access) is NAL's computerized bibliographic database.

The 1994 LJI updates previous editions and includes sections for titles added since 1992, titles no longer indexed, an alphabetical listing by journal title, an abbreviated title listing, a listing by subject category, and a list of journals abstracted in AGRICOLA. The new LJI includes 1,560 journals currently indexed into AGRICOLA by NAL.

Journals are listed alphabetically by full title in the main section of the publication. In addition, each entry includes the abbreviated title, NAL call number, International Standard Serial Number (ISSN), place of publication, publisher's name, indexing coverage of the journal (i.e. — indexed selectively or cover-to-cover), and indicates if author abstracts are included in the AGRICOLA records.

The listing is an important reference tool for indexers, catalogers, reference librarians, and other users of AGRICOLA. AGRICOLA contains records for agricultural literature citations of journal articles, monographs, theses, patents, computer software, audiovisual materials, technical reports, maps, manuscripts, and microforms.

The LJI includes titles indexed for AGRICOLA as of January 1994. NAL's Indexing Branch updates the list periodically to reflect additions, deletions, and other changes.

For additional information contact Carol Dowling at:

(301) 504-6829

TTY: (301) 504-6856

FAX: (301) 504-5213

Internet: cdowling@nalusda.gov

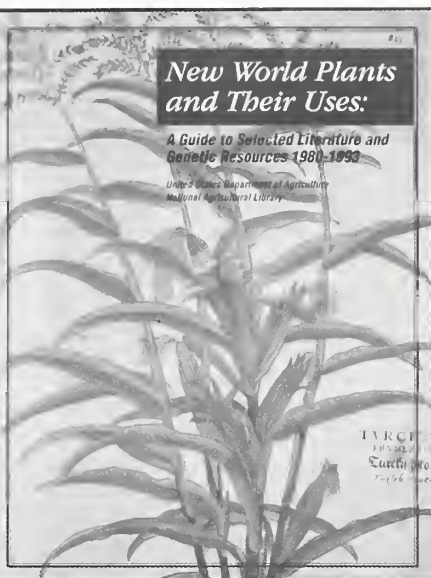
To obtain a copy of the *List of Journals Indexed in AGRICOLA*, send a self-addressed label with the request to:

Indexing Branch; Attn: LJI-94

National Agricultural Library

10301 Baltimore Boulevard  
Beltsville, MD 20705-2351





## Bibliography on Native American Plants Available

A list of literature on native American plants has been compiled by NAL's Plant Genome Data and Information Center (PGDIC). Dr. Susan McCarthy, PGDIC coordinator, said the bibliography titled "New World Plants and Their Uses: A Guide to Selected Literature and Genetic Resources 1980-1993" was produced as a resource for scientists involved in plant genetics, conservation, sustainable agriculture, and related sciences. It is an effort to list much of the knowledge available on disappearing species of native American plants. Some of the plants covered include: mountain huckleberry, Bromelia, and Andean potatoes.

"Today, many native plant species are fast becoming extinct," Dr. McCarthy said. "Their disappearance is more than the loss of cultural and biological diversity. We lose the genes that could be used to improve modern plant varieties—even to cure disease."

The bibliography includes citations of literature on New World plants taken from AGRICOLA, NAL's bibliographic database. Citations are categorized by crop usage for food, medicine, and other purposes. There is also a list of germplasm and data sources for important native American

plants. The literature is available in the NAL collection. The bibliography was compiled by Joanne Meil of PGDIC.

To obtain a copy of the bibliography, send a self-addressed label with the request to:

*Plant Genome Data and  
Information Center  
Fourth Floor  
National Agricultural Library  
10301 Baltimore Boulevard  
Beltsville, Maryland 20705-2351*



photo: J. Swab

Sue Phelps



## Phelps Joins RDDS Team at NAL

Sue Phelps started working for NAL's Document Delivery Services Branch (DDSB) as the Office Automation Assistant December 26, 1993. She divides her time between administrative and automation duties. One of her primary administrative responsibilities is establishing and maintaining cooperative agreements, including those for RDDS, the Regional Document Delivery System. Others include editing and producing DDSB informational materials, coordinating branch statistics, and processing invoices for payment. Her automation duties include recommending, acquiring, managing, and installing software and hardware to support DDSB activities. She is also a microcomputer liaison for the branch, and is responsible for creating and updating branch databases, spreadsheets, and other microcomputer software applications.

Phelps previously worked for a year and a half as a secretary for the Plant Genome Research Program, Agricultural Research Service, National Program Staff, USDA. She also worked for six years in USDA's Food Safety Inspection Service, in various divisions first as a clerk, then as a secretary. Before coming to USDA, she worked at the Department of Army for about 2 years as a microcomputer equipment operator.

She is currently attending classes at Anne Arundel Community College, Arnold, MD, to obtain her degree in computer science. She resides in Glen Burnie, MD, with her six-year old son, Kenny.

# First Student From American University Interns At FNIC

by Natalie Updegrove Partridge  
Food and Nutrition Information  
Center, NAL

**FNIC 101:** (3 graduate credits) Work in the Food and Nutrition Information Center located at the National Agricultural Library. Learn about resources in food and nutrition, including print, audiovisual, and electronic sources. Create a publication listing the most up-to-date nutrition books. Try nutrition software programs. Assist with building databases of resources. Number of students: 1.

Does this sound like an ideal course? Would you sign up to take it? Alisa Green is doing just that! Alisa, a graduate student in the Health Fitness Management Program at American University, is working at NAL's Food and Nutrition Information Center during the spring semester. Alisa is the first American University student to work at FNIC, and the first student ever to work at FNIC for college credit!

Alisa decided to pursue an internship at FNIC because she wanted to learn more about nutrition, especially access to nutrition information and resources. In the Health Fitness Management program Alisa took the required nutrition course, but wanted more. Her instructor, Dr. Anastasia Snelling, who knew about FNIC's work with students, suggested that she work at FNIC for credit. Alisa contacted FNIC staff and arranged to start her internship in January. Alisa will work at FNIC for 16 hours per week and earn three graduate credits that will count as an elective course. Alisa felt that working at FNIC was "one of the best ways to get more experience in nutrition." She also added, "And besides I really like libraries because my mom is a librarian."

While at FNIC, Alisa's major pro-

ject is to update the *Nutri-Topics* on "Sensible Nutrition." *Nutri-Topics* is a series of resource lists produced by FNIC. Each *Nutri-Topics* features a different nutrition subject area. The "Sensible Nutrition" *Nutri-Topics* lists reputable consumer books, newsletters, and brochures on basic nutrition, nutrition information, and healthy cookery.

During her internship at FNIC, Alisa is also helping to maintain FNIC's in-house databases of resources, answer FNIC reference requests, write directions for food and nutrition software programs, and test directions for accessing electronic sources of information. She is also creating a display featuring the new food label in the FNIC lobby area.

In addition to her work at FNIC, Alisa is currently working at The National Center for Health Fitness at The American University and completing the courses needed for her degree.

After finishing her internship at FNIC in April, Alisa will go to Cincinnati to complete an internship in community health promotion at the American Heart Association to fulfill requirements for graduation. She will graduate with an M.S. in Health Fitness Management in August. When asked



photo: J. Swab

Alisa Green

what she hopes to gain from her work at FNIC, Alisa replied "more exposure to information about nutrition resources, how to use library information systems, and the opportunity to do a publication." She hopes to "widen her horizons, find out what is out there, and come back and use FNIC as a resource in the future."



## USAIN National Conference Report

by Dana W. R. Boden  
Assistant Professor  
C. Y. Thompson Library  
University of Nebraska-Lincoln

Photographs by Joseph N. Swab, NAL

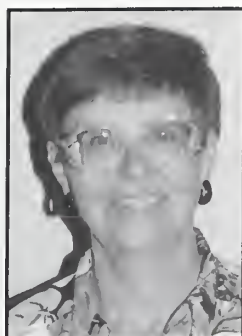
The Third National Conference of the United States Agricultural Information Network (USAIN) was held at Auburn, Alabama, Thursday through Saturday, October 28-30, 1993. The conference theme was "Rural Informa-

tion at the Crossroads: Issues and Opportunities," with sub-themes each day of the conference. The conference attracted approximately a hundred attendees from the National Agricultural Library, land-grant institutions, federal agencies, corporations, other libraries, and vendors.

### Conference Opening

The Conference opened with a welcoming session chaired by USAIN President Martha Alexander and





**Martha Alexander**  
President  
Univ. of Missouri



**Richard Rohrer**  
Past President  
Univ. of Minnesota



**Beverlee French**  
Secretary/Treasurer  
U. California, Davis



**Robyn Frank**  
NAL/USAIN Liaison  
NAL



**Kent Hendrickson**  
Univ. of Nebraska

photo courtesy K. Hendrickson



**Brice Hobrock**  
Kansas St. Univ.



**Barbara McBride**  
Food Marketing  
Institute, D.C.



**Cynthia Via**  
Pioneer Hi-Bred In-  
ternational, Inc., IA

## 1993-94 United States Agricultural Information Network Executive Council

remarks by Dr. William Highfill, Director of the Auburn University Library; Dr. Paul Parks, Auburn University Provost; Ms. JoAnn DeVries, Program Chair, University of Minnesota; and Ms. Sheri Downer, Local Arrangements Chair, Auburn University. Ms. Martha Alexander also hosted a breakfast for new USAIN members, and exhibits opened with exhibitions by Auburn University Office of Information and Research; BellSouth; CAB International; the National Agricultural Library and NAL's Plant Genome Data and Information Center; SilverPlatter; and SOLINET. Past USAIN President, Mr. Richard Rohrer, University of Minnesota, was moderator at an opening luncheon for the general membership, at which the principal speaker was Mr. Sam Taylor, Special Assistant to the Under Secretary for Small Community and Rural Development, USDA Farmer's Home Administration.

Mr. Taylor's address, "USDA and

Communications with Rural America," concerned goals, among them, striving for efficiency and avoiding duplication. He viewed Secretary of Agriculture Espy's primary goal in this area to be the revitalization of small farmers and small family farms. Mr. Taylor fielded some pointed questions from the audience, which were not easily answered.

### Thursday

Thursday's theme, "Defining Rural Information Issues," was supported by two sessions moderated by Mr. Kent Hendrickson, University of Nebraska-Lincoln, and Ms. Robyn Frank, National Agricultural Library. Speakers were: Dr. Cornelia Flora, Head of the Department of Rural Sociology at Virginia Tech (soon to start a position at the North Central Rural Development Center at Iowa State University); Dr. Janet Poley, Deputy Administrator, Communication, Information and Technology, USDA Extension Service

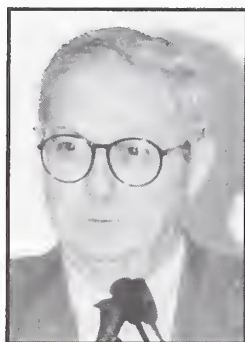
[since moved to Agricultural Satellite Corporation, (AG\*SAT) Lincoln, Nebraska]; and Ms. Melanie Gardner, Rural Information Center, National Agricultural Library.

Dr. Flora spoke on "Rural American and Global Restructuring: the Importance of Social Infrastructure." She noted that the great percentage of the rural poor are working poor. Among the interesting points she made was her recommendation of a book on rural poverty written by Cynthia Duncan.

Dr. Poley's topic was "Americans Communicating Electronically." She recognized the instrumental role library, as well as extension, people have in carrying this capability forward. She reported that there are ten working groups in this area; they are not just Washington-based, and desire more in-put from across the nation. She noted the growing concern with the questions of access for the information haves and have-nots. She realized that libraries are often better located than



William Highfill



Paul Parks



JoAnn DeVries



Sheri Downer



Sam Taylor

extension offices to address concerns. She noted both are moving from being centers with walls to networks.

Ms. Gardner reported on "Information and Resources for Rural Areas." Highlights of her presentation were: the Rural Information Center (RIC) within NAL deals with anything rural-related, not just agricultural issues; the Rural Information Center Health Service (RICHS) is also within the RIC's direction; and rural development is a major point of Secretary Espy's revamping of USDA.

Also on Thursday, the USAIN Committee and Interest Group Meetings were held. These are important since USAIN is a young organization; along with the USAIN Executive Council, these groups addressed not only the business of the particular committee or interest group, but also the direction USAIN should take in the future. Committees meeting at USAIN were: Legislative & Government, Ms. Jan Olsen, Chair; Membership, Ms. Eleanor Mathews, Chair; Nominating, Mr. Kent Hendrickson, Chair; Telecommunications & Networking, Mr. John Ulmschneider, Chair. Interest Group meetings included: AGRICOLA, Ms. Anita Bat-

tiste, Chair; Collection Management, Ms. Peggy Johnson, Chair; Document Delivery, Ms. Margaret Drews, Chair; Rural Information, Ms. Toni Powell, Chair; and Technical Services, Ms. Amy Paster, Chair.

#### Friday

Friday's theme was "Exploring Electronic Highways to Rural America." The day's sessions, moderated by Dr. William Highfill of Auburn University and Ms. Helen Smith of Pennsylvania State University, consisted of reports on activities libraries or extension personnel have carried out to make information available, especially electronically, and on developments in the world of communications. This included a report, by Dr. James Summers, Director, Office of Evaluation Studies, University Extension, University of Missouri, on "Evaluation of a Pilot Test to Produce and Distribute the *Journal of Extension* Electronically." Dr. John Kane, Coordinator of the Youth Development Information Center (YDIC) at NAL, gave a report entitled, "The Child, Youth, and Family Education and Research Network [CYFERNET]: Some Preliminary Steps in Networking for Extension."

[See also the report on YDIC and CYFERNET in *ALIN* May/June 1992, 18(5/6):10-12.]

The USAIN participants also heard two other speakers on Friday, one corporate and the other from the federal government. Mr. Stephen Barreca, Manager of the Technology Forecasting Group at BellSouth spoke on "Emerging Communication Technologies." Mr. Larry Williams, Special Assistant to the Under Secretary, National Telecommunications Information Administration spoke on "Government and the Superhighway." Both seemed unaware that those they were addressing were information professionals and aware of current developments in the electronic information field.

At a special session on Friday, Dr. Brice Hobrock, Dean of Libraries, Kansas State University, presented the report developed by USAIN's preservation group: "A National Preservation Program for Agricultural Literature." Copies were distributed to participants who will be taking them home to their institutions for further discussion prior to adoption as the national program.



Cornelia Flora



Janet Poley



Melanie Gardner

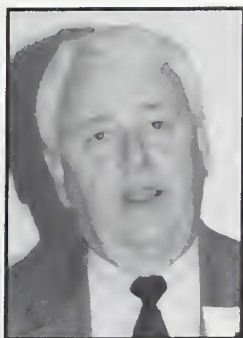


Stephen Barreca



Helen Smith





James Summers



John Kane



Larry Williams



Irwin Weintraub



Connor Bailey

## Saturday

The theme the last day of the USAIN Conference was "Opportunities for Meeting Rural Needs." The first morning session moderated by Mr. Irwin Weintraub, Rutgers University, featured speakers addressing issues related to problems faced by Black farmers and landowners, and ways better access to information may help them make more informed decisions and utilize current laws rather than be taken advantage of by those who use legalese. Speakers from the Department of Agricultural Economics and Rural Sociology, Auburn University, and their topics were: Dr. Connor Bailey, "Environmental Racism," and Dr. James Novak, "Profitable and Environmentally Sound Agriculture: A Sustainable Approach to the Future." Speakers from the George Washington Carver Agricultural Experiment Station, Tuskegee University, and their topics were: Dr. Robert Zabawa, "The Age Factor and Black Land Ownership," and Dr. George Paris, "Black Farmers."

Next, were three concurrent sessions where USAIN members presented chosen contributed papers on "issues and projects involving services

to rural communities."

In a session moderated by Ms. Elizabeth Fuseler of Colorado State University, three papers were presented and discussed. Ms. Carol Graham Covey and Ms. Jeanne Stierman of Western Illinois University presented "Building a Rural Information Collection at a Non-Land Grant University" which also described how access has been provided to the targeted community and expanded beyond that original community. Mr. Harvey R. Gover of Washington State University at Tri-Cities presented "User Accessed AGRICOLA Made Available to a Branch Campus AG Program via the Internet and FirstSearch." In the third paper, Mr. Gregory Lawrence of Cornell University covered the topic, "Information Poor, Information Rich: Rural America and the Internet."

A second session, moderated by Ms. Eleanor Mathews of Iowa State University, contributed two papers demonstrating additional linkage between rural America and the National Agricultural Library. Ms. Peggy Beavers of NAL and Mr. Ted Sibia of the University of California, Davis, presented "Issues in Providing Information to Rural and Remote Constituencies" and Mr.

Gabriel Hegyes presented "Sustainable Agriculture Network: An Overview." [See also Hegyes article in the October-December 1993 *ALIN*, 19(10-12):6.]

The third session, moderated by Ms. Dana Boden, University of Nebraska, Lincoln, consisted of two presentations. The first, "Information Literacy for Extension Specialists" by Ms. Jodee Kawasaki of Montana State University (MSU), covered research done for a Master's thesis on the information literacy skills of Extension Specialists in the MSU service region. The second, "Meeting the Information Needs of the Front Line Information Providers," presented by Ms. Patricia Wilson of the University of Kentucky Agriculture Library, was on the organization, setup, and delivery of an in-service training workshop for extension agents in Kentucky, "Using the Library at a Distance."

The afternoon session, moderated by Ms. Amy Pastor of Pennsylvania State University, highlighted information provision and communication with people in rural areas. The three speakers addressed trends and anticipated developments in this subject area. Dr. Ann E. Thompson, Assoc-



James Novak



Robert Zabawa



George Paris



Elizabeth Fuseler



Carol Graham Covey





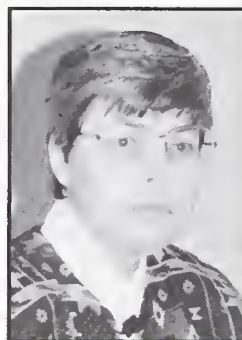
Jeanne Stierman



Harvey Gover



Gregory Lawrence



Eleanor Mathews



Peggy Beavers

iate Provost and Vice-President for Extension and Director Alabama Cooperative Extension Service, Auburn University, covered "University Outreach in the 21st Century." Ms. Antoinette P. Powell, Director, Agriculture Library, University of Kentucky, in "Information to the People: Cooperation Between the Library and Agricultural Extension," stated that by 1995 the University of Kentucky will get out of the print business in Extension. All those leaflets, bulletins, and reports generated by the Extension Service in Kentucky will be distributed electronically to county extension offices, and printed only when appropriate for the client's request.

Concluding the session and the conference, Ms. Willonla Goers, Director, Software Services and Broadcast Information, Pioneer Hi-Bred International, gave a paper entitled, "Beam Me Up Scottie!: New Trends in Pioneer Hi-Bred International's Communications with Rural America."

#### Other Events

As conferences often do, this one also gave the opportunity to meet and talk with vendors who serve the agricultural information field. One of these,

SilverPlatter, was demonstrating new search software using Windows; another, CAB International, hosted a breakfast for invited customers on Friday, where participants learned of new developments, and best of all were given the opportunity to give ideas and suggestions directly to CABI's representative, Ms. Andrea Powell.

At the USAIN Business Meeting a topic of much concern was the reorganization of the USDA and what it may mean for the National Agricultural Library. NAL was directed to merge with three other agencies to form the Agricultural Research and Education Service (ARES). Much support had come forth, and more was expressed at the conference, for NAL keeping its name and remaining a library and clearly identifiable. The proposal was in Secretary of Agriculture Espy's hands at the time of the conference. USAIN encouraged interested members to send their opinions on the issue to Secretary Espy.

A highlight of the conference was a Friday bus trip to Tuskegee University for a tour and reception hosted by Ms. Annie King, retired Head Librarian, Tuskegee University Libraries, and head of the National Sweetpotato In-

formation Center (NSPIC). The tour included the George Washington Carver Museum; the NASA-Tuskegee University Research Center for Food Production for Space Missions, Dr. D. Mortley, host; the Plant Molecular and Cellular Genetics Laboratory, Dr. C.S. Prakash, host; the Center for Research on Diet, Lifestyle, and Cardiovascular Disease in Rural Black Alabamians, Dr. R.D. Pace, host; and NSPIC, Ms. King and Ms. Sibyl Caldwell, hosts. Prior to the reception, held at NSPIC, several sweet potato facts and food samples were highlighted and served. Ms. King moderated a program at which USAIN was welcomed by Dr. Walter Hill, Dean, School of Agriculture and Home Economics, Dr. William Lester, Provost, Tuskegee University, and Mrs. Edna Williams, Head Librarian, Tuskegee University Libraries.

Another highlight of the conference was the hospitality of the Auburn University hosts. The Hotel and Conference Center, right across the street from the university's main library, was excellent. On Thursday evening, the A.U. Libraries hosted a reception at the conference center and proudly gave tours of the recently remodeled



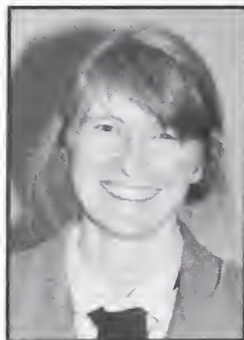
Ted Sibia



Gabriel Hegyes



Dana Boden



Jodee Kawasaki



Patricia Wilson





Amy Pastor



Ann E. Thompson



Antoinette P. Powell



Willona Goers

and expanded main library. On Friday evening (Halloween weekend) all were encouraged to attend an annual campus event sponsored by the College of Architecture, where elaborately carved pumpkins were on display and had been judged and awarded prizes. On Saturday evening, the A.U. Libraries again played host with barbecue, jazz entertainment, and an instructional session on the correct way to do a "WAR EAGLE!!" cry.

A quite informative and enjoyable conference.

[Joseph N. Swab, *ALIN* Editor, NAL, contributed to this report.]



Auburn University Hotel & Conference Center



Jan Olsen



John Ulmschneider



Anita Battiste



Margaret Drews

## USAIN Committee & Interest Group Chairs\*

**Legislative & Government:** Jan Olsen, Cornell University, Ithaca, NY

**Membership:** Eleanor Mathews, Iowa State University, Ames, IA

**Nominating:** Kent Hendrickson, University of Nebraska, Lincoln, NE

**Program Planning:** JoAnn DeVries, University of Minnesota, St. Paul, MN

**Telecommunications and Networking:** John Ulmschneider, North Carolina State University, Raleigh, NC

**AGRICOLA:** Anita Battiste, University of Florida, Gainesville, FL  
**Collection Development:** Chair vacant.

**Document Delivery:** Margaret Drews, Cargill, Minneapolis, MN

**Rural Information:** Antoinette Powell, University of Kentucky, Lexington, KY

**Technical Services:** Amy Pastor, Pennsylvania State University, University Park, PA

\* Photos of other chairpersons appear earlier in the USAIN article.

**Authors' Abstracts of  
Papers From the  
USAIN National  
Conference, "Rural  
Information at the  
Crossroads: Issues  
and Opportunities,"  
Auburn University,  
October 28-30, 1993\***

\*Not all papers were submitted for publication, but some are still expected to be received. Full papers are being published in the *Journal of Agricultural & Food Information*, Volume 2, Numbers 2, 3, & 4, (and perhaps in Volume 3), edited by Robyn C. Frank (Head, Information Centers Branch, NAL), and published by Haworth Press, Inc, 10 Alice Street, Binghamton, New York 13904-1580. Abstracts are arranged in the order papers were presented at the USAIN conference.

For photos of the speakers see those in the conference report on the preceding pages.



photo: J. Swab

The George Washington Carver Museum at Tuskegee University was part of the USAIN site visit.

**USDA and Communications with  
Rural America**

by Sam Taylor

Special Assistant to the Farmers  
Home Administrator, U.S. Department of Agriculture

This address emphasizes the need to revitalize the rural community. To revitalize the community, reorganization is going to have to take place. "Change" is going to occur in agricul-

ture, starting with the U.S. Department of Agriculture. This change, reorganization, is the key to the future success of rural America and agriculture.

**Rural America and Global  
Restructuring**

by Cornelia Butler Flora

Director, North Central Regional Center for Rural Development, Iowa State University

Rural America has disadvantages of distance, scale, and weak linkages, which are further exacerbated by global economic restructuring. These disadvantages are manifest in the increasing urban rural differentiation, including higher rates of poverty and increasing cultural clashes. The nature of work in rural areas, as it is both experienced and perceived, shape the possibilities of rural areas to generate and control change. Both information and new institutions to provide the education to utilize it are needed. Delivery of information and education must take into account the great diversity of rural America and the growing inequality within it.

**Dana Boden**

Dana W. R. Boden, author of the report on the USAIN conference, is an Assistant Professor and Subject Specialist Librarian at the University of Nebraska-Lincoln. She has liaison responsibilities for five departments in the College of Agricultural Sciences and Natural Resources, plus the Center for Biotechnology. She holds a B.S. in Agriculture and an M.A. in Education from Western Kentucky University, and the M.S.L.S. from the University of Kentucky. She currently is working on a doctoral degree in Postsecondary Administration at the University of Nebraska-Lincoln.



photo: J. Swab

Dana Boden





photo: J. Swab

Hydroponic sweet potatoes at the NASA/Tuskegee University Research Center Food Production for Space Missions.

## Emerging Communication Technologies

by Stephen L. Barreca

Manager, Technology Forecasting Group, BellSouth Telecommunications, Inc.

In this age of personal computing and global telecommunication, we might define communication as the ability to acquire, process and convey information. Computer and telecommunication technologies, which are advancing at exponential rates, are greatly enhancing our ability to communicate. Within the next ten years, virtually all desk-top office workers will have a super personal computer on their desks, and broadband communication will be less demanding than a long distance call. These trends will reduce the ability to acquire, process, and exchange large volumes of information to a commodity routinely taken for granted. Universal access to this commodity will propel us into a "New Age of Communication." All of humanity will benefit. Those who embrace this new age will lead and flourish; the rest will follow.

## Electronic Journal of Extension: From Hard Copy to Electronic

by James C. Summers

Director, Office of Evaluation Studies for University Extension, University of Missouri

The *Journal of Extension* is the official refereed publication of the Cooperative Extension Service system located at 72 land-grant universities and USDA. During 1993, the *Journal* is engaged in a pilot test and related evaluation to examine issues related to converting a hardcopy publication to multiple electronic formats. The *Journal* is being produced and distributed electronically using the Internet and several information servers such as Almanac, Gopher, WAIS, and World Wide Web.

## Information and Resources for Rural Areas

by Melanie Gardner

Rural Information Center  
National Agricultural Library  
U.S. Department of Agriculture

This paper describes the development and services of the Rural Information Center (RIC) located at the National Agricultural Library. Outlined are the types of requests received and resources used in responding to queries.



photo: J. Swab

Dr. C.S. Prakash and staff engage in genetic engineering of sweet potatoes at the Plant Molecular and Cellular Genetics Laboratory at Tuskegee University.

### **Libraries Without Walls: Vision for a National Information Infrastructure**

by Larry Williams

Special Assistant to the Under Secretary, National Telecommunications Information Administration, U.S. Dept. of Commerce

Selected highlights of the Clinton Administration's plans for the National Information Infrastructure are presented. The concept of a "library without walls" will be made possible with the use of advanced telecommunications and information technology.

### **Environmental Justice: Mobilization of a Grassroots Social Movement**

by Conner Bailey

Professor of Rural Sociology  
Charles E. Faupel  
Associate Professor of Sociology, and  
Kelly D. Alley  
Assistant Professor of Anthropology,  
Auburn University

Many minority communities in the United States have experienced the consequences of environmental racism. Until recently, mainstream environmental organizations have tended to ignore this phenomenon, while civil rights organizations have focused their attention primarily on political and economic rather than environmental discrimination. Based on case study material from Alabama and Mississippi, this paper examines efforts to forge an alliance between grassroots environmental and civil rights organizations.

### **Profitable and Environmentally Sound Agriculture: A Sustainable Approach to the Future**

by James L. Novak

Associate Professor, Dept. of Agricultural Economics & Rural Sociology, Auburn University, and  
W. Robert Goodman  
Extension Economist, Auburn University

Definitions of sustainable agriculture commonly include twin goals of profitability and environmental soundness. This paper examines the incentive systems moving agricultural producers towards achievement of these goals, and incentive systems that might increase the efficiency of movements toward agricultural sustainability. The feed-back mechanism of the economic incentive system pushing farmers toward profitability is contrasted with the unclear, and sometime conflicting, incentives offered farmers wishing to move toward more sustainable production systems.



photo: Marie Loreton, NSPIC

At the National Sweetpotato Information Center (NSPIC) the NAL participants in USAIN's site visit and Tuskegee University/NSPIC staff gathered for a joint photo. (L-R) Robert Anderson, Shirley Souder, Gabriel Hegyes, Robyn Frank, Joseph Swab, and Maria Pisa of NAL; Annie King, Walter Hill, Edna Williams, and Sybil Caldwell of Tuskegee; and Janice Kemp, Jane Gates, and Peggy Beavers of NAL.





photo: J. Swab

Barbara Buchanan (left) of NAL speaks with Toni Powell about NAL's Plant Genome Data and Information Center while Melanie Gardner (right) of NAL talks with Jodee Kawasaki.

### Factors Associated with Black-owned Landloss

by Robert Zabawa

Research Associate Professor and Coordinator of Social Science Research, George Washington Carver Agricultural Experiment Station, Tuskegee University

Since the 1982 report by the U.S. Commission on Civil Rights, special emphasis has been focused on Black farmers in the U.S. Of particular importance has been the crisis surrounding Black-owned landloss. Historically, this decline has been due to take-away strategies such as tax sales, partition sales, and accelerated foreclosures by larger land owners and members of the political establishment. At the same time, these schemes were aided by the traditional mode of land transfer among Black owners: without a legal document or will. Using survey results from Black farmers from the Black Belt region of South-Central Alabama, this paper: (1) examines the positive influence of land ownership on farmers; (2) discusses landloss and the factors behind this phenomenon; (3) considers the overall risk environments surrounding the issue of landloss and how these environments might affect current and future generations of farmers; and (4) proposes avenues for action.

### Building a Rural Issues Collection at a Non-Land-Grant University

by Carol Graham Covey  
Collection Development Librarian,  
Western Illinois University, and  
Jeanne Stierman  
Reference Librarian, Western Illinois  
University

Over the past four years the Illinois

Institute for Rural Affairs has dedicated funds to building a rural issues collection at Western Illinois University. Publications have been acquired from a variety of commercial trade publishers, university presses, and independent organizations. As the collection grew, Institute agencies distributed comprehensive annotated bibliographies to their clients and research associates. Most materials are cataloged and included in the Illinois state-wide online catalog, Illinet Online, making the items available to a potential user group extending far beyond the original intended audience.

### User-Accessed AGRICOLA Made Available to a Branch Campus AG Program Via the Internet and FirstSearch

by Harry R. Gover

Branch Campus Librarian, Washington State University at Tri-Cities

In September 1992 Washington State University at Tri-Cities became one of the nation's first subscribers to OCLC's FirstSearch in order to make user-accessed AGRICOLA and its other automated indexing services available free of charge to everyone on the Ethernet, the branch campus computer network, with its Telnet access to the Internet. Arrival of user-accessed



photo: J. Swab

Shirley Souder and Robert Anderson pause as they prepare for an exhibit session at the NAL booth at USAIN.



AGRICOLA at WSU Tri-Cities was timely due to the addition of a new bachelor of science degree program in the integrated cropping systems typical of the surrounding Columbia Basin arid lands region; the opening of a Food and Environmental Quality Laboratory to monitor local use of pesticides and other substances; the presence on campus of the Cooperative Extension Services District Office, covering eleven counties in the area; and close links with the WSU Agriculture Research and Extension Center at nearby Prosser.

### Information Poor, Information Rich: Rural America and the Internet

by Gregory W. Lawrence  
Government Information Librarian,  
Albert R. Mann Library, Cornell  
University

Rural America has traditionally lagged urban areas in the delivery of information goods and services. Two major barriers to enhanced information access, distance and a limited number of information resources, can be negated by telecommunications networks such as the Internet. Using three common Internet telecommunications systems, the Cooperative Extension Service is examined as a developing resource of networked information for rural America.

### Electronic Information Literacy for Extension Professionals

by Jodee L. Kawasaki  
Reference Librarian, Montana State  
University

The literature alone justifies a needs assessment study of information-related competencies for Extension professionals. U.S. Extension System (ES) has put together task forces to project future roles for the organization. These task forces have identified a need to examine how Extension professionals manage information. Extension professionals all across the U.S. have written literature concerning the need for the use of information technologies and for the provision of training in this area. For information



photo: J. Swab

CABI representative Andrea Powell speaks with Andrejka Svorenova, librarian from the Institute of Scientific and Technical Information for Agriculture, Nitra, Slovakia, who was visiting on a Cochran Fellowship at NAL.

literacy to be achieved by Extension professionals, information-related competencies must be taught. There are three parts to the survey instrument: the competencies, training information, and demographic information. The competencies characterize technologies used for gathering and transferring information, "information-finding" skills, and legal and ethical

issues related to the information industry. The second section of the survey covers training information in two parts: previous training and learning preferences. The survey's last section is selected demographic factors. The factors include position title, age, sex, years in profession, highest degree held, and membership in professional organizations.



photo: J. Swab

Delighted participants at the USAIN exhibits visit SilverPlatter (front) and Auburn, BellSouth, CABI, and others (background).





photo: J. Swab

At USAIN interest group meetings participants discuss strategies, solve common problems, and make plans; here the AGRICOLA interest group meets.

### Meeting the Information Needs of the Frontline Information Providers

by Patricia S. Wilson  
Public Services Librarian, University of Kentucky

The University of Kentucky Library is actively working with county agents to make them aware of available

electronic services. An in-service training program was held in August 1992. Fifteen agents from around the state participated. The organization and structure of the workshop is presented along with plans for future training.

### University Outreach in the 21st Century

by Ann E. Thompson  
Associate Provost and Vice President for Extension and Extension Director, Auburn University

Educational outreach, especially from land-grant universities, will have a more prominent, visible role in the twenty-first century. There is a widespread belief among university leaders that the effect of universities must reach beyond the limits of the campus to influence the social, cultural and economic well-being of constituents positively. Enhanced outreach efforts will involve all academic units and provide appropriate faculty rewards for their accomplishments. Existing extension/outreach organizations such as Cooperative Extension Services will expand their base to draw from the total university expertise and knowledge base. Funding will be a challenge as public resources become less available. Distance education through satellite communications and other advanced technology will be a growing part of education outreach.



photo: J. Swab

The Ralph Brown Draughon Library at Auburn University, scene of some of the activities at the USAIN National Conference.

### Information to the People: Cooperation Between the Library and Agricultural Extension

by Antoinette Paris Powell  
Director of the Agriculture Library, University of Kentucky

Cooperation between the Cooperative Extension Service and the Agriculture Library at the University of Kentucky dates back to the early 1970s. Initiatives have included new agent orientation, participation in extension functions, working with extension specialists, and serving on extension committees. Current involvement with extension includes working with the National Extension Technology Conference and the Electronic Format Committee. Involvement continues to grow as services are automated.

# Highlights of National Agricultural Library Activities, February 1994

## ISIS Strides Onward

ISIS (Integrated System for Information Services), NAL's online union catalog, continued to grow during the year. As of September 1993, it contained approximately 333,800 indexing records and 533,400 cataloging records. In addition to NAL citations, the cataloging database includes machine readable citations from the National Arboretum and USDA's Agricultural Research Service (ARS) Regional Research Center Libraries.

In May 1993 a new version of the VTLS Library software was loaded. This new version, VTLS-92 also brought NAL a step closer to implementing online indexing.

In September, NAL's Indexing Branch began using the ISIS Journal Indexing Subsystem to input current indexing records. Using ISIS in this capacity enables searchers of the ISIS system to retrieve AGRICOLA journal citations two to six weeks earlier than previously possible. It will also result in a significant cost savings to NAL since two processing systems will no longer be needed. This achievement is the

result of years of work in development and testing by VTLS, Inc., the library software vendor, and NAL staff.

The year also saw ISIS used to provide data for the North American Title Count, which was developed and coordinated by the American Library Association to access collection strengths. It is the successor to the National Shelflist Count, which was last performed in 1989 through manual procedures.

## ISIS Infostation Demonstration Project Moves Ahead

NAL continued work on the VTLS InfoStation pilot demonstration project at the library. Under this project, NAL installed the InfoStation to assess the feasibility of providing access to full text and images of selected portions of library collections via seamless linkage through an online bibliographic database.

The InfoStation, which is a "scholar's workstation" configured for NAL on a NeXT computer platform, serves as a front end to ISIS, NAL's integrated library system, which was

also developed by VTLS. ISIS runs on a Hewlett-Packard 3000/900 computer. Patrons can use the InfoStation to search the bibliographic records in NAL's online public access catalog maintained on the computer and retrieve the full text and images and sound related to those records. A seamless linkage for those records to a multimedia database has been created by NAL on the InfoStation.

The multimedia text and image database created by NAL's National Agricultural Text Digitizing Program staff is comprised of materials from three core collections: aquaculture, food and nutrition, and agricultural trade and marketing. NAL also added digitized audio recordings that are linked to the images through hypermedia links to provide voice explanations to selected images.

A portion of the materials used in the InfoStation database came from digitized materials used in NAL's CD-ROM production while the remainder of the material was scanned from NAL's print collection. The NAL InfoStation database contains approximately 10,000 pages of full text, color images, black and white images, and audio. Researchers can also use hypermedia links to annotate the records with explanations or to create new links to other images, sound, or related documents.

In 1993, new NeXT operating software and a new version of the InfoStation application software developed by VTLS was installed. A Local Area Network system is being installed for use and comprehensive evaluation throughout 1994.

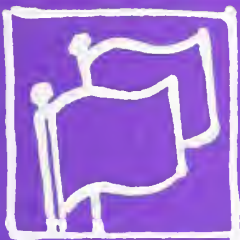


photo: J. Swab

Visitors from Michigan State University (MSU) talked with NAL's Indexing Branch about developing a proposal for a "flexiplace" work plan for catalogers modeled after NAL's successful flexiplace plan for indexers. (L-R) Carol Dowling (NAL); Colleen Hyslop (MSU); Leah Black (MSU); Holly Irving (NAL); and Shirley Edwards (Head, Indexing, NAL).

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## Visitors

### FY93 Highlights: Secretary Espy's First Visit to NAL



photos: J. Swab

Secretary Espy examines materials related to George Washington Carver (above), while (L-R) Ron Young, Joseph Howard, NAL Director, and Alan Fusonie, Head of NAL's Special Collections present materials of interest and answer questions.

(Right) Ron Young demonstrates to Secretary Espy the laser video disk and computer database developed by NAL to provide instant access anywhere to Forest Service photographs and the companion system for USDA photographs, developed jointly with USDA's Photography Division.



photo: J. Swab

Secretary Espy looks at items of interest in NAL's collection of Forest Service photographs while Ron Young (background) searches the power files for additional subject files.



(Highlights, continued)

### **NAL Participates in National Cataloging Program**

Last summer *ALIN* reported that NAL was selected as a participant in the National Coordinated Cataloging Program, a cooperative cataloging program of the Library of Congress (LC) in which selected libraries produce full, high-quality cataloging for the LC database and bibliographic utility (OCLC). NAL began full participation in July 1993 and contributed 65 records to the program in the first 3-month period.

### **NAL/Land-Grants Cooperate in Adding State Pubs to AGRICOLA**

Since 1984, the National Agricultural Library and its cooperators have worked together to enhance NAL's collection of and improve access to state extension service and agricultural experiment station publications through the NAL/Land Grant State Publications Program. Since this program's inception, over 64,000 citations reflecting publications produced by these institutions have been added to the AGRICOLA database. There are 53 universities in the program. About half of these are also including agricultural theses and dissertations.

### **NAL Document Delivery Information Available by Internet**

NAL's Document Delivery Services Branch now accepts Internet requests for information about NAL holdings, collection access, and document delivery services at:

[circinfo@nalusda.gov](mailto:circinfo@nalusda.gov)

The branch responds with holdings information or policy statements. Additionally, the branch regularly reviews several Internet listservs, responding to requests for help in locating materials in the library.

By sending an Internet message to NAL, Internet users may request information on: titles in the NAL collection (journal, article, book, translation, audiovisual, and other media or types); how to borrow the title or obtain a photocopy; and NAL and USDA services, programs, and policies.

### **Interlibrary Borrowing Services Improved by NAL**

The year saw the beginning of important changes in NAL's Interlibrary Borrowing Section (ILB), which is responsible for obtaining for USDA researchers materials that are not available from the NAL collection. Traditionally, the borrowing process had been time-consuming with ILB transmitting requests to other libraries, and then waiting to receive the material via regular mail. The focus of interlibrary borrowing changes at NAL has been to improve customer service by reducing the time required to obtain and deliver documents to the USDA researcher.

ILB has begun to utilize a variety of private companies that specialize in rapid document delivery. One of these companies is the Colorado Alliance of Research Libraries (CARL Systems, Inc.). The company's "Uncover2" service permits on-line ordering of journal articles and delivery of the articles via telefacsimile usually within 24 hours. CARL Systems has successfully negotiated an agreement with certain publishers to scan and retain a number

of articles in electronic format. The agreement permits delivery of these materials in about six hours. Uncover2 also provides an option for users to specify different telefacsimile numbers, which allows ILB to order documents and have them faxed directly to the patron. Direct delivery removes the need for ILB to act as an intermediary, decreases the turnaround time, and eliminates postage costs.

Another step toward improving services was the purchase of an electronic document transmission and receipt workstation. Similar to the workstation used in the North Carolina State University Digitized Document Transmission Project, in which NAL participated several years ago, this workstation consists of a flatbed scanner, a high-quality laser printer, and a DOS-based microcomputer. A significant component of the system is the ARIEL software, a user-friendly interface that allows the operator to scan documents and transmit them instantaneously via the Internet to other ARIEL sites. The software produces

(See Highlights, page 28)



photo: B. Norris

Representatives of USAIN's Preservation Committee met at NAL to discuss the developing "National Preservation Program for Agricultural Literature." (L-R) Keith Russell, Pamela André, and Joseph Howard, NAL; Nancy E. Gwinn, Asst. Director, Collection Management, Smithsonian Institution Libraries, author of the plan with advice of the committee; Jan Olsen, Director, Mann Library, Cornell University; and Brice Hobrock, Dean of Libraries, Kansas State University, and committee chair.





photos: B. Norris

Jody Jaeger, Special Assistant to Secretary of Agriculture Espy, visited NAL to discuss the Secretary's interest in the library and a variety of programs and activities. At the meeting were (L-R) Tom Bryant, Jr., Executive Director, Associates of NAL; Mr. Jaeger; Joseph Howard, NAL Director; Ms. Lee Kimche McGrath, who was assisting NAL with a Smokey Bear Exhibit; and Thomas E. Bryant, Sr., Chairman, Non-Profit Management Associates. Meeting with Joseph Howard (below) was Dr. Garanchs, Professor of Veterinhary Medicine, Latvia, with regard to NAL's cooperative projects with Eastern European Libraries.



photos: J. Swab

Congressman Richard J. Durbin (Top) (D, Illinois) addressed the Organization of Professional Employees of the Department of Agriculture (OPEDA).

(Above) Afterwards Congressman Durbin (right) spoke with NAL Director Joseph Howard (center) and Tom Bryant, Jr., (left) Executive Secretary of the Associates of NAL.

(Left, L-R) Joseph Howard met with Dr. Harry C. Mussman of the U.S. Embassy in Rome and Wayne Denny, OICD, to discuss matters related to FAO and international agricultural in-





### (Highlights, continued)

300 dot per inch resolution, offering image quality far superior to current telefacsimile technology. Moreover, in contrast to the long-distance charges for telefacsimile, transmission costs have been eliminated. ILB has been receiving articles filled by ARIEL sites and will continue to expand its use of this and other new software and technology.

These two new services, and others soon to be implemented, will enable the Interlibrary Borrowing Section to continue to improve service to USDA researchers.

### NAL Computer Network Grows Rapidly

NALnet, the NAL computer network, experienced dramatic growth during 1993. Of particular note was the transition of NAL Internet mail service to "Cliff," the NAL Sun SPARC2 UNIX workstation. All NAL staff needing mail access received accounts on Cliff. Half-day training sessions were held for NAL users. Staff usage is high and continues to grow.

NAL is using PINE mail software for its Internet mail service and NAL staff are using such tools as gophers and WAIS to search remote information systems through Internet.

The NALnet backbone was also extended in 1993. Fiber optic cable now connects the NAL computer room to eleven strategic "hub" locations throughout the library. From these hubs it is possible to extend copper wire to the desktop of each NAL employee. During 1993, "to the desktop" wiring was installed for NAL's Indexing Branch, Document Delivery Services Branch, Plant Genome Data & Information Center staff, and Information Systems Division.

In collaboration with the National Science Foundation, Iowa State University, and the USDA Extension Service, also in 1993, NAL launched an initiative to deploy a system for the management of electronic information in agriculture. A prototype pilot project known as the "AgNIC" (Agricultural Network Information Center), which will implement the initiative, will be developed by NAL as part of this effort.

### ALF Activities Expanding Yearly

ALF (Agricultural Library Forum), NAL's computerized bulletin board which provides remote access to library services and products, experienced another busy year in 1993.

A number of options for facilitating access to ALF for Internet users were studied. Discussions with NAL managers on this topic were tabled in August, when the National Technical Information Service (NTIS) of the U.S. Department of Commerce announced that the FedWorld bulletin boards would allow dial-out via their gateway system.

ALF usage increased immediately after this announcement, and an increase in the size of the current-user file was needed to accommodate extra callers. After connecting to FedWorld via Telnet, or direct dial, users may connect to any of more than 100 federal bulletin board systems and database services. ALF is the second item on the list. A Small Business Administration bulletin board also includes ALF as a dial-out option from its toll-free access system.

ALF system upgrades in 1993 included the loading of version 17.4 of RMMS-PC that includes Global Mail Reads, Personal Uploads, and Bank Time, among other features. The purchase of two more U.S. Robotics modems gave 9600 baud access for all four ALF telephone lines. The lines for all four nodes were set to automatically roll-over, allowing a caller on any line to connect to any vacant line.

File compression was implemented for all NAL Quick Bibliography (QB) titles, as well as for a number of larger documents from NAL's Food and Nutrition Information Center (FNIC), Rural Information Center (RIC), the USDA's Foreign Agricultural Service and other sources. A survey of NAL documents on ALF was completed as part of an Electronic Media Issues Subcommittee's work. Several hundred bibliographic and full-text NAL documents are loaded on ALF, including all current QB series titles, special reference briefs, NAL news releases, special publications from NAL information centers, and articles from NAL's newsletter, *Agricultural Libraries Information Notes (ALIN)*, as well as a number of calendars and resource lists from

NAL sources.

ALF subboard activities in 1993 included the use of ALF to manage a Request For Proposal (RFP) on a multi-million dollar software contract solicitation. The "PCIMS" subboard was created to assist the procurement efforts of USDA's Food and Nutrition Service, Agricultural Marketing Service, and Cooperative State Research Service, who were soliciting bidders for their Processed Commodity Inventory Management System (PCIMS) software project. Numerous reports were received on the value of ALF in this contract process.

There were significant upgrades and updates to subboard bulletins, activities and features for other NAL units. New subboards were added for FNIC ("FOOD"), the Agricultural Research Service's libraries management steering committee ("STARS"), and Rural Certified Nurse Midwives ("RCNM").

Callers to ALF in 1993 totaled over 50,000 and there are currently more than 200 files on ALF for user access. More than 20 subboards exist covering various special interest topics.

### Unified Agricultural Thesaurus Project Moves Ahead

NAL continues to be a key player in the international effort to produce a Unified Agricultural Thesaurus (UAT). The purpose of this project is to improve worldwide access to agricultural information through an improved thesaurus system. NAL, CAB International (CABI), and the Food and Agricultural Organization (FAO) of the United Nations are working to develop classified versions of both AGROVOC, the thesaurus used by FAO for the AGRIS database, and the CAB Thesaurus, used by CABI for CAB Abstracts and by NAL for AGRICOLA. NAL and FAO have signed a letter of agreement to complete the classification of AGROVOC. This classification work is the first step in unifying the thesauri.

Representatives of NAL, CABI, and FAO reached agreement on an overall thesaurus classification structure, a significantly revised and expanded version of an outline the three organizations agreed on in 1991. The

(See Highlights, page 30)





photo: J. Swab

While in the United States investigating matters related to horticulture and plant pathology, Dr. Alex Heyns (above, right), Director of the South African Agricultural Research Council (SAARC), visited NAL and ARS in Beltsville. Accompanying Dr. Heyns were (L-R) Willie Burger, International Affairs, SAARC; Dr. Richard S. Soper, Assistant Administrator, International Research Programs, USDA; and Dr. Johan Grobbelaar, Agricultural-Scientific Counsellor, Embassy of South Africa, when they visited NAL and its director, Joseph H. Howard.

(Below, L-R) Thiendou Niang and Daniel Assoumou Mba of the Technical Centre for Agricultural and Rural Co-operation (CTA), The Netherlands, visit with NAL Director Joseph Howard to discuss a joint program of cooperative projects.

photo: J. Swab



photo: J. Swab

(Above) Mr. and Mrs. Felix Vaquez Quintana of Instituto Nacional de Investigaciones Forestales y Agro-pecuarias (INIFAP), Mexico, visited Joseph Howard (Center) and the National Agricultural Library regarding an ongoing program of cooperation between NAL and INIFAP.

(Below, L-R) Janet Stitt, Chief Acquisitions Services, Canadian Agriculture Library (CAL), and Mae Cutler, Assistant Director, Technical Services and Regional Liaison, CAL, met with Joseph Howard and other NAL managers to discuss common problems and solutions in processing and providing access to the agricultural materials received by both national libraries.

photo: J. Swab



### (Highlights, continued)

planned use of this structure as the basis of NAL's classification of AGROVOC and CABI's classification of the CAB Thesaurus represents a major step in reconciling the two major agricultural thesauri, and in eventually developing a Unified Agricultural Thesaurus. The outline was presented at a July policy meeting of the UAT/AGRIRES project partners in Bonn, Germany, and will be a component in ZADI's agricultural expert system, AGRIRES. [See related article in this issue of *ALIN*, page 8.]

Another effort focuses on the development of thesaurus management software to support the thesaurus project. The software will be developed in conjunction with the Canadian International Development Research Centre (IDRC). In the spring of the year, representatives of NAL, FAO, CABI, and IDRC met in Rome to discuss the MINISIS-Based thesaurus management software. Specifications were reviewed, amended, and then accepted by NAL and CABI. Development of the software began in the fall.

### Networking Information Available through Image Transfer

NAL, the University of Pittsburgh School of Library & Information Sciences, and Michigan State Cooperative Extension Service began the first operational phase of a project to examine the use of images in information retrieval.

A database of 2,000 digitized images of rare botanical prints plus horticultural pests and diseases was produced and made accessible through a Windows client online from a server in Pittsburgh. Local network testing began, prior to making the system available on the Internet. Macintosh and X-Windows clients are currently being developed. A telecommunications protocol was designed to maximize the use of the network server during the interactive sessions.

After searching the database, images can be downloaded for preview in thumbnail sizes and requested in high-resolution and full-color in a choice of formats. NAL is developing a CD-ROM version of the database. Once the online version is fully operational

and accessible at test sites, full Internet access will be available. An evaluation will compare the different delivery mechanisms as well as analyze the preferred image formats and resolutions for different applications.

### NAL Plans for the Future

NAL initiated a strategic planning process in 1993 that will help guide library operations into the next century. Under the guidance of the Office of Management Studies of the Association of Research Libraries, the first phase of the process focused on developing an understanding of strategic planning, conducting environmental scans, and initiating a "visioning" process.

In early 1993, staff were introduced to key elements of strategic planning in a half-day orientation for all staff and a three-day retreat attended by about 35 staff.

In April, a Study Group consisting of staff at all levels and representing all parts of the library was named. This group functions as a steering committee that guides and coordinates the process. Five additional work groups were named in the first phase:

- The History Work Group developed a chronology of NAL events and identified major trends, issues, and patterns in its evolution.
- Environmental scans were conducted by the Internal and External Current Situation Work Groups in order to identify NAL's strengths and weaknesses and external opportunities and threats.
- The Visions Work Group initiated the visioning process by developing four scenarios of possible NAL futures, evaluating the results of discussions about these scenarios, and drafting a preliminary vision statement.
- The Communications Work Group kept NAL employees apprised of the process as it developed.

At the close of 1993, the study group was coordinating activities that will identify NAL's core values. The entire visioning process will result in a statement of NAL's mission, core values, and vision for the future. The completion of the visioning process will set the

stage for action planning.

The entire strategic planning process has been an open process. Fifty-four NAL employees have been assigned to the work groups and more than 80 percent of NAL's staff have participated in discussions related to the internal environmental scan, the scenarios, and the core values. NAL managers expect the process to result in identifying specific actions to be taken for NAL to realize the future NAL envisions for itself. Also, the dedication of staff energy and time to the process (i.e.—thinking creatively, sharing insights and perspectives, developing new skills in leadership and group dynamics) are changing NAL for the better even as the process evolves.

### NAL Strengthens Ties to 1890 Land-Grant and Tuskegee Libraries

In an effort to improve cooperation and strengthen partnerships with Historically Black Colleges and Universities, in 1993 NAL focused on expanding library staff development opportunities for students of 1890 institutions.

NAL provided internships in the Public Services Division for two individuals from 1890 institutions. Evelyn Yates, the coordinator of computer searches at John B. Watson Memorial Library, University of Arkansas at Pine Bluff, trained for six weeks at NAL. A student majoring in agribusiness at the University of Maryland Eastern Shore, Lakesha Ruffin, trained for the summer. During the internships, the students received orientation to NAL programs, services and activities and practical experience in library operations in which they expressed an interest.

Also, in related activities, members of the 1890 Land-Grant and Tuskegee University Library Directors' Association met with the NAL director and key library staff during the association's spring meeting. NAL staff provided technology demonstrations and program updates.

(See photos on facing page.)

### NAL Internships a Popular Program

During the year, visitors from Germany, China, the West Indies, Nigeria, Egypt, Slovak Republic, Czech Repub-





photo: J. Swab

Lakesha Ruffin



photo: J. Swab

1890 Library Directors: (L-R) Mrs. Karen McDaniel, Kentucky State University; Dr. Barbara W. Jenkins, South Carolina State College; Mrs. Jessie Arnold, Alcorn State University, Mississippi; Mrs. Yildiz B. Binkley, Tennessee State University; Dr. Alberta Mayberry, Langston University, Oklahoma; Ms. Vallie Pursley, (staff), Tennessee State University; Mrs. Alene Young, North Carolina A&T State University; Dr. Nicholas Gaymon, Florida A&M University; Mrs. Elizabeth B. Wilson, Lincoln University, Missouri; Dr. Dudley V. Yates, Prairie View A&M University, Texas; and Mrs. Jessie C. Smith, University of Maryland-Eastern Shore.



photo: J. Swab

Evelyn Yates with Joseph Howard

lic, and University of Arkansas at Pine Bluff spent weeks at NAL observing and participating in the library's daily activities. NAL's Educational Programs Unit arranged for the extended stays of these visitors, assisting in everything from locating housing to giving orientations on NAL and the area. Particular areas of interest of these visitors were automation, food and nutrition, and cataloging.

#### NAL Support Sought in Commodity Futures Trading Info

USDA's Extension Service and the Commodity Futures Trading Commission, requested NAL's as-

sistance in supporting the Extension Service's *Commodity Futures Trading, Agricultural Option Pilot Program*. The agencies also requested that NAL expand the scope of its Agricultural Trade and Marketing Information Center (ATMIC) to include multimedia materials on risk management, futures and options markets, legislation and regulations, commodity trading, and related fields.

#### ATMIC Provides Help in Establishing Information Centers

Officials of several foreign countries visited NAL's Agricultural Trade and Marketing Information Center in 1993 seeking information and suggestions in establishing similar information centers in their countries.

These officials included: the economic counselor of the Nicaraguan Ministry of Economic Development and members of the Embassy of Nicaragua; the marketing director, PROMEX, Argentina and the Commercial Attache, Embassy of Argentina; a senior consultant, Harvest Foods LTD, Canada (doing a study for the Ministry of Food and Agriculture, Saskatchewan, Canada); and the trade commissioner, Danish Trade Office. Also visiting ATMIC were the president, World Trade Counselors; and the director, Economic Development, Asian Sector, Overseas Private Investment Corporation and the marketing Director, Wyoming International Trade Services.

These organizations all expressed an interest in developing information centers on agribusiness, economic development, international marketing and trade. ATMIC shared suggestions on the availability of marketing resources in print and electronic format, technology application, outreach, net- working, and specialized services.



### Animal Welfare Courses Offered

NAL's Animal Welfare Information Center (AWIC) continued to offer a unique training course in 1993 on meeting the information needs of those using animals in research, teaching, and testing. The one-and-a-half day workshop includes an overview of the Animal Welfare Act, a review of the alternatives concept, an introduction to NAL, AWIC, and other information organizations, instruction on the use of information databases, and online searching exercises.

In 1993, AWIC conducted a total of eight workshops reaching 170 professionals. The workshops were conducted at NAL, at two pharmaceutical companies, at an Animal and Plant Health Inspection Service (APHIS) regional conference, at Georgetown University, and at a National Institutes of Health training workshop.

Workshop participants included the director of Office of Animal Care and Use for the Food and Drug Administration's Center for Veterinary Medicine, the director of Investigator Training for the National Institutes of

Health, a legislative affairs assistant for the Humane Society of the United States, and the National Animal Care Coordinator for USDA Agricultural Research Service.

In response to participants' requests for more information on government regulations on alternatives to animal use in research, AWIC invited a veterinarian medical officer from APHIS to instruct at the workshop.

### AWIC Information Products Available Electronically

In 1993, AWIC began compiling an electronic library of full-text animal welfare information. AWIC routinely updates the library. The files are in WordPerfect 5.1 and ASCII formats and are available by sending 5 formatted discs to AWIC. Information in the files includes:

Volume 1: Animal Legislation and Policies – contains the Animal Welfare Act, Amendments, and Regulations; Public Health Service Policy, Guide, and Health Research Extension Act of 1985, Section 495.; Animal Enterprise Protection Act of 1992; Good Labora-

tory Practice for Nonclinical Laboratory Studies (21CFR); Good Laboratory Practice Standards (40CFR).

Volume 2: Animal Welfare Recommendations and Resources – contains the American Association for the Accreditation of Laboratory Animal Care (AAALAC) position statements; AAALAC's Rules of Accreditation; The National Research Council's "Education and Training in the Care and Use of Laboratory Animals;" "A Guide for Developing Institutional Programs," the National Institutes of Health non-human primate management plan; "Essentials for Animals Research: A Primer for Research Personnel," a joint publication of the NAL and the University of Illinois; "Audio-Visuals Relating to Animal Care, Use, and Welfare (AWIC Series 93-01);" "Information Resources for Reptile, Amphibians, Fish and Cephalopods Used in Biomedical Research (AWIC December 1992);" "Animal Care and Use Committees (SRB 92-16);" "Environmental Enrichment Information Resources for Nonhuman Primates: 1987-1992."



photo: J. Swab

The participants in a typical AWIC workshop gathered for this group photo: AWIC instructors include D'Anna Berry (left); Mike Kreger (5th from left); Debra Beasley (8th from left); Tim Allen (6th from right); and Cindy Smith (2nd from right).



### Aquaforum Links Sites for Statistical Tracking

The second phase of a USDA aquaculture evaluation study funded by NAL's Aquaculture Information Center (AIC) was initiated early in 1993. As part of the study, AIC established "Aquaforum," an electronic communications system that includes a statistical database, a private e-mail module, and a hypertext module. Through Aquaforum, six remotely located pilot sites from throughout the United States entered reference statistics on a daily basis to an AIC fileserver in order to track and profile aquaculture information services provided by the sites and AIC.

The six pilot sites were Auburn University, Ralph Brown Draughon Library; Iowa State University, North Central Regional Aquaculture Center; Louisiana State University, Louisiana Cooperative Extension Service; University of Delaware, Sea Grant Marine Advisory Service; University of Hawaii, Hamilton Library; and Washington State Department of Agriculture.

In addition, the University of Hawaii received data from a subsystem that linked remote Pacific sites. This data was included in Aquaforum.

Analysis of the data will allow participants to profile clients, client referrals, subjects and species requested, and geographic parameters. This information will assist in identifying strengths and weaknesses in information delivery programs and in improving aquaculture information services.

### U.S./Japan Exchange Aquaculture Information Thru NAL

AIC coordinated an international effort to provide documents on aquaculture to Japan for the August meeting of the United States/Japan Natural Resources—Aquaculture Panel. Materials were collected through the Joint Subcommittee on Aquaculture which is comprised of 23 federal agencies. Japan provided 65 titles in return, which AIC added to its collection of aquaculture materials.

### NOAA/AIC Cooperate to Add Rare Materials to NAL Collection

The National Oceanic and Atmospheric Administration (NOAA) Central Library, the Ralph Brown Draughon Library of the University of Hawaii and NAL's Aquaculture Information Center initiated a project to add to the NAL collection rare documents on Pacific aquaculture which have been abstracted in the Aquatic Sciences and Fisheries database. Other participants were Cambridge Scientific Abstracts, the Pacific Aquaculture Program, the Pacific Islands Network, and NAL's Acquisitions/Serials and Cataloging Branches.

### Biomonitoring Database Produced with NAL Help

In cooperation with NAL's Biotechnology Information Center (BIC), the National Biological Impact Assessment Program at USDA's Cooperative State Research Service (CSRS) released a CD-ROM Biomonitoring Database. The database contains biosafety information on the release of genetically engineered organisms into the environment. Composed primarily of full text environmental assessments produced by USDA's regulatory arm, the Animal and Plant Health Inspection Service, the database is intended to provide scientific risk assessment information to the biotechnology research community, state and local governments, public interest groups and the interested public.

BIC assisted in collecting records, obtaining copyright clearances, and in producing and distributing the database.

### Biotech Publications Available on Internet

In an effort to make its publications accessible to as wide an audience as possible, BIC made many of its documents available via the Internet in 1993.

With the assistance of Virginia Polytechnic Institute, an anonymous FTP site was established that allows worldwide access to electronic copies of BIC's publications. The Internet was used extensively throughout the year to fill reference requests from patrons, publicize new BIC publications, and gather information in the area of biotechnology.

### Food and Nutrition Software Demonstration Center Expands

NAL's Food and Nutrition Information Center (FNIC) expanded its National Software Demonstration Center for food and human nutrition software significantly in 1993. During the year, FNIC acquired over 200 programs compatible with IBM, Macintosh, or Apple personal computers for the center's software collection. Subjects covered include diet analysis, meal planning, food service, nutrition education, and recipe management. All

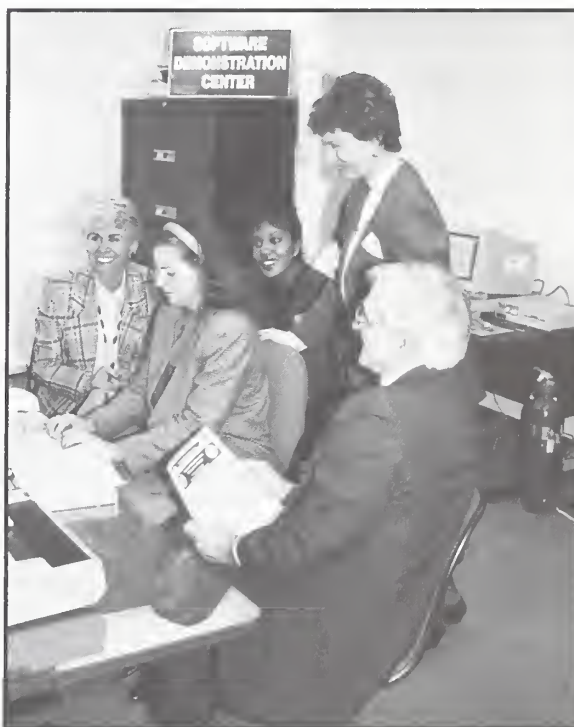


photo: J. Swab

Gina McNeal, head of FNIC's Food Labeling Information Center demonstrates new software to Naomi Kulakow (left), Coordinator, Food Labeling Education, FDA; Demetrius Henderson (center), FDA; and F. Edward Scarbrough (right), Director of FDA's Office of Food Labeling. Sandy Facinoli (standing), Coordinator of FNIC, hosted the visit to NAL.



programs were donated to the center by vendors and developers. Visitors from throughout the United States use the center annually. A listing of the software is available electronically and in print in the FNIC publication "Food and Nutrition Information Center Microcomputer Software Collection."

### **NAL Conducts Food Irradiation Evaluation Study**

FNIC received funds in 1993 to begin an evaluation study on providing international access to food irradiation materials. During the year, the library converted an NAL-produced CD-ROM containing thousands of pages of unpublished food irradiation research materials to another software package, thus improving its usefulness.

FNIC also contacted a food irradiation expert to evaluate thousands of archival documents on food irradiation research conducted by the U.S. Army in the 1950s and 60s. NAL has had the documents in storage for several years. The materials are being scanned for a series of CD-ROMs that will provide access to materials not available anywhere else in the world.

Germany, France, and other countries have indicated an interest in providing documents to an international center for food irradiation information located at NAL. NAL is attempting to obtain funding for this project from the Food and Agricultural Organization of the United Nations. The UN's International Consultative Group for Food Irradiation and the USDA's Food Safety and Inspection Service strongly support this project.

### **NAL Gathers Food Guide Pyramid Materials**

In 1993, FNIC and USDA's Human Nutrition Information Service signed a memorandum of understanding that calls for the agencies to work together to build a database of all educational materials that use the USDA's new Food Guide Pyramid, which was developed to provide the American public with basic information on good nutrition and healthy diets. All materials acquired under this memorandum of understanding become part of the NAL collection and appropriate items are listed in AGRICOLA.



photo: J. Swab

Alisa Green, FNIC Intern from American University, works on the database listing materials using USDA's Food Guide Pyramid.

### **Centenary of USDA Human Nutrition Research Celebrated**

Material from the NAL collection is serving as the basis for a CD-ROM of research materials and personal memorabilia of Wilbur Olin Atwater, one of the first human nutritionists in the United States. The disc is being produced by the International Life Sciences Institute in cooperation with USDA. In 1893-94, Dr. Atwater was the first researcher to receive funds from USDA for human nutrition research.

### **NAL Activities Grow in Plant Genome Area**

NAL's Plant Genome Database and Information Center (PGDIC), established in 1991, convened a series of database workshops with experts to discuss the nature, goals, and direction for the public access database. Participants included database experts from the University of California, Los Alamos National Laboratory, the National Science Foundation, and USDA's Germplasm Resources Information Network. As a result, the Plant Genome Database was made available on Internet at NAL December 1, 1993. In support of USDA's Plant Genome Research Program, NAL continued to provide increased coverage of plant genetics literature, accumulating in the AGRICOLA database over 15,000 citations related to molecular genetics.

### **USDA Plant Genome Database Managed by NAL**

NAL is playing a key role in the USDA National Genetics Resources Program, a cooperative effort of ARS, CSRS, and NAL to incorporate germplasm conservation and five genome research programs (plant, tree, animal, insect, and microorganisms).

NAL has management responsibility for the data gathered from the genome research programs and from the international research community, and stored in a master database. USDA and other cooperators have been engaged in the database design efforts and are coordinating the capture and evaluation of genetic information. The target user groups are plant breeders and molecular geneticists.

During the year, the Plant Genome Database (PGD) evolved from the design and development stage to full production. The database consists of genome data which has been uploaded from five species groups: wheat, maize, soybean, pine, and *Arabidopsis*, as well as relevant bibliographic data from AGRICOLA. It contains a variety of genomic data including information about maps (genetic, physical, etc.), sites (mappable objects such as genes), variations of sites (e.g., mutations and alleles), phenotypic traits, probes, gene products, and germplasm.

Interactive access to PGD is provided via the In-  
(See Highlights, page 35)





photo: J. Swab

Beth Aurecchia



photo: J. Swab

Etta Sue Haggerty



photo: J. Swab

Shirley Tuthill



photo: J. Swab

Robert Isenstein

## Volunteers

NAL continues to be very fortunate in having volunteers who contribute their work to support the library's programs. The four persons pictured above were among the volunteers honored in a reception held in 1993; they became participants in the volunteer program since the last article about volunteers in *ALIN* [Vol. 18, Nos. 5/6, May/June 1992, pages 1-7]. Many of those who were included in that article are still working for the library, some as volunteers, and a few in library staff positions. Others have gone on to other activities, including employment elsewhere for which their NAL experience was beneficial in find-

ing the new positions or performing in them.

Three of the above volunteers worked with the Food and Nutrition Information Center (FNIC), and have completed their volunteer work and gone to other employment.

Beth Aurecchia worked on the list of food and nutrition serials in the library's collection. The list is retrospective and includes periodicals that have ceased publication, are not indexed, or are not generally known to be of subject interest.

Etta Sue Haggerty is a home economist who worked on many of FNIC's projects and activities during her time

as a volunteer.

Shirley Tuthill is a librarian who worked on a database of books and materials held in the FNIC offices as working tools.

Dr. Robert Isenstein, a retired USDA parasitologist, works with the Aquaculture Information Center (AIC). Among the many areas in which he contributes help are with database searching and telephone reference, preparation of publications, and previewing and evaluating software and CD-ROMs for aquaculture applications and AIC use.

### (Highlights, continued)

ternet and modem dial-up service. The data and information are presently made available on NAL's Agricultural Genome Gopher Server and NAL's Agricultural Genome World Wide Web Server. Access will also be made available via automated responses to electronic mail queries. The database provides links to other relevant databases such as DNA and protein sequence databases, and the Agricultural Research Service's GRIN (Germplasm Resources Information Network).

In FY 1994, the database will expand to include data from solanaceous crop plants, rice, cotton, and ultimately about 70 important crops. A CD-ROM release of the PGD is also

planned for FY 1994.

### Outreach an Important Part of PGDIC

As NAL's Plant Genome Database and Information Center concluded its third year of activities in 1993, outreach continued to play a major role.

During the year, PGDIC exhibited at and/or attended the following meetings: American Society of Agronomy, Plant Genome I, American Association for the Advancement of Science National Meeting, Maize Genetics Conference, Federation of American Societies for Experimental Biology, American Society of Plant Physiologists, Fifth International Conference on Arabidopsis Research, American Society for Biochemistry and

Molecular Biology, the Gatlinburg Conference on Plant Genome Analysis, American Society for Information Sciences, and Mid-Atlantic Plant Molecular Biology.

Overseas, in addition to exhibiting at the 17th International Genetics Congress in the United Kingdom, PGDIC staff visited: The John Innes Institute in Norwich, which has strong genetics programs in wheat, *Brassica*, and *Arabidopsis*; The Nottingham Arabidopsis Stock Center at which PGDIC staff were given an overview of operations by the Stock Center's director; and CAB International in Wallingford where an overview of its international operations by the Head of the Plant Breeding and Genetics Department was given.

As a result of international outreach, PGDIC expects to sign a memorandum of understanding (MOU) to establish a database node with the Agriculture, Food and Research Council of the United Kingdom (AFRC). It is also expected that the AFRC will help to expand the agreement to the European Communities. An existing MOU with Japan will be expanded to include the exchange of rice genome data.

In 1991, *Probe*, the official newsletter of the USDA Plant Genome Research Program, was launched. Since then, its circulation has grown considerably, to about 4,000 subscribers. The newsletter links Plant Genome Research Program managers, their users, and potential users. *Probe* covers issues relating to the NAL and individual species databases; reports from the program director's office; and general interest and scientific developments. It is published quarterly and is available internationally to scientists, educators, and the private sector.

### **NAL Increases Coverage of Plant Genetics Literature**

In support of USDA's Plant Genome Research Program, NAL's Indexing Branch continues to provide increased coverage of plant genetics literature in AGRICOLA. Since the initiation of the Plant Genome Research Program in 1990, AGRICOLA has accumulated over 25,000 citations related to molecular genetics. This represents an increase of 240 percent in the number of citations added in 1993 over those added in 1990. The percentage of genetics and breeding citations that have full abstracts increased from slightly over 20 percent in 1990 to over 50 percent in 1993.

Over 5,000 citations in AGRICOLA are identified as containing molecular sequence data. Efforts continue to enhance access to plant genetics information in AGRICOLA by improving NAL's indexing vocabulary in this subject area.

### **RIC Has Another Full Year**

NAL's Rural Information Center (RIC) engaged in a myriad of information service and promotional activities in 1993.

RIC Staff provided a RIC/RICHS

overview to Nebraska Senator Bob Kerrey and his staff at his offices on Capitol Hill. Senator Kerrey expressed an interest in electronic technology and information access for both rural and urban populations. Other NAL staff members provided system demonstrations and overviews on NAL's use of Internet and plant genome.

A video news release on RIC's Rural Information Center Health Service (RICHHS) was broadcast nationwide over television satellite by USDA Television News Service to promote RICHHS services and toll-free access.

Senator J. Bennett Johnston of Louisiana requested RIC participation in Louisiana Rural Development Conferences held throughout Louisiana in the summer of 1993. Nearly twenty state and federal rural program officials gave overviews of their programs and participated in workshops in three rural Louisiana communities. More than 400 local officials attended the conferences.

RIC staff briefed chief policy advisors from the staffs of Senator Patrick Leahy and Senator Richard Lugar about the RIC/RICHHS program. The briefings were arranged by the NAL Associates.

RIC responded to a special request from the Presidential Northwest Strategy Team, a federal interagency task force, to identify federal, state, regional, and local resources for Washington, Oregon, and California. RIC staff compiled a 100-page resource book entitled, *Pacific Northwest Resources for Economic Viability*, for the USDA Strategy Team. RIC also listed economic development strategies for the Pacific Northwest.

### **Agreements Provide Rural Information Services to Many**

RIC completed a busy year of interagency and cooperative agreements in 1993. Among them were:

- NAL and the Office of Rural Health Policy of the Department of Health and Human Services renewed a five-year Interagency Agreement for RIC to continue operating the RICHHS component of RIC. The minimum annual funding level will be \$417,000.

- RIC and the National Rural Studies Committee (NRSC) of Oregon State University established a Trust Agreement in which NRSC will provide up to \$12,500 in funding for the compilation, revision, and printing of two publications: *A Rural Studies Bibliography* and the *Directory of Rural Studies Scholars and Educators*. RIC staff will revise and update the publications.
- RIC and the North Carolina Center for Rural Health Research (NCCRHR) of the University of North Carolina established a Specific Cooperative Agreement under which RIC will provide funds for NCCRHR to prepare rural health factsheets on various topics. The first factsheet will be on physician retention and recruitment.
- The USDA Forest Service (FS) transferred \$10,000 to RIC through an interagency agreement to help RIC provide rural information to FS employees.
- RIC and the Clarion University of Pennsylvania established a new five-year cooperative agreement for continued support to RIC. The first agreement covered 1988 to 1993. The new agreement covers an internship program and joint sponsorship of rural economic development information conferences.
- RIC entered into a new cooperative agreement with the University of Maryland to provide support for the Rural Information Center. The agreement parallels one in place with the University of Maryland in support of the RICHHS program.
- RIC began loading the monthly newsletter of the National Association of Development Organizations Research Foundation onto NAL's electronic bulletin board ALF at the request of the foundation. The foundation began publishing the newsletter in 1992 as "a monthly report for the economic development community." The newsletter is prepared under a cooperative agreement with the U.S. Department of Commerce's Economic Development Administration, with



additional funding from USDA's Forest Service.

### TTIC to Help Farm Equipment Industry

In 1993 NAL's Technology Transfer Information Center (TTIC) launched a project to aid the agricultural equipment manufacturing industry. During the summer, industry representatives met with technology transfer officials from the Army, National Institute of Standards and Technology, National Institute of Occupational Safety and Health, NASA, and the Department of Energy to discuss technology-related needs. Problem statements on six specific needs were distributed.

Potential solutions identified by these and other Federal, university and private sector laboratory personnel will be documented in reports and distributed to manufacturing and supplier organizations and industries.

The objectives of this TTIC project are to find technological solutions to meet an agricultural industry's needs, and evaluate the process used to determine if it should be institutionalized within USDA.

### Water Quality Information Added to Computer Network

NAL's Water Quality Information Center (WQIC) continued to manage and improve the Water Information Network (WIN), a conference on ALF — NAL's electronic bulletin board.

Several new bulletins (electronic fact sheets) were developed by WQIC including: monthly listings of satellite video conferences related to water quality, a listing and description of water hotlines and clearinghouses, a listing of current drinking water standards, and descriptions of several water quality improvement programs.

The number of files (longer documents) increased from five to thirteen and include a file developed at Penn State University that lists, describes, and provides contacts for 73 water quality and environmental databases. Also available on WIN is a list of meetings and calls-for-papers on water quality. This is updated monthly by WQIC staff.



## Announcement



## NAL and USAIN at ALA and SLA

The traditional meetings of USAIN with updates on NAL activities held in conjunction with the annual meetings of the American Library Association and the Special Libraries Association will take place this year as follows:

- ALA, Miami: Friday, June 24, 1994, from 4:00 to 5:30 p.m.
- SLA, Atlanta: Wednesday, June 15, 1994, luncheon meeting 11:30 to 1:30, sponsored by Associates of NAL, Inc. Reservations required. See USAIN listserv or SLA programs for details.

The locations (buildings and room numbers) are not known at the time of this announcement, so participants will have to consult their convention programs.

This year NAL will be exhibiting at SLA only; the booth number will be in the convention/exhibition program. Other items of interest related to NAL will be identified at the USAIN meetings.



photo: J. Swab

A group of Pennsylvania Extension agents visited the Water Quality Information Center. Joseph Makuch (4th from right), WQIC Coordinator, and Bonnie Emmert (right), librarian with WQIC provided information on the center's services and products, and arranged for demonstrations of NAL's databases and technology applications.



## "I miss Joe Howard..."

....words often heard at NAL these days.  
Why?  
Let me tell some ways!

(Left) Giving demos to USDA administrators at the D.C. Reference Center.

(Center) Dancing in Poland.

(Above left) Telling a story to Secretary Espy, while introducing him to NAL Staff.

(Above right) Broadcasting live video to Africa with George Collinet of U.S.I.A.

photos, same order: J. Swab, K. Russell, J. Swab, & B. Norris



## Joe Howard Retires

The exhibit, starting with an Oklahoma sweatshirt on the left and a USDA sweatshirt on the right and a map in the middle with bright colored tacks in all of the countries he visited, documents highlights of Joseph H. Howard's tenure as NAL director with photos, publications, and NAL artifacts. Two cakes illustrate some pleasures in Joe's life and high points in his career.

photos: J. Swab





## Joe Howard Retires



In addition to creating the decorated cakes, staff prepared a variety of food and beverages, donated by USAIN and the Associates of NAL, for Joe's retirement party.



The Federal Focus Jazz Band [also provided by USAIN and the Associates of NAL] played music for Joe Howard's retirement party. In addition to creating Joe's retirement exhibit, staff volunteers decorated the library with balloons and flowers, and made all of the arrangements for the party.



Despite the worst ice storm in the memory of persons living in the counties around Beltsville and Washington, DC, several hundred persons came to Joe Howard's retirement party to honor him for his accomplishments during his career and to wish him a long and happy retirement.

photos: J. Swab





## ... Friends Bearing Gifts

(Clockwise from bottom left) Mary Silva, the Director's secretary and planning coordinator for the party, presents Joe Howard with a photo album and other gifts from NAL staff and friends, while Pamela André, mistress of ceremonies, applauds.

Tom Bryant, Jr., Executive Director, Associates of NAL, presents President with a "Bird of Paradise" watercolor by Leila Moran, President of the Associates and NAL retiree, on behalf of the Associates.

Dreama Black, NAL retiree, presents Joe with an orchid lei she had flown in from Hawaii for the occasion.

Victor Desroches, Director, Canadian Agriculture Library, Agriculture Canada, presents Joe with a book of photography about Canada.

From NAL staff Joe receives a framed photograph of Maryland's historic Wye Oak, a seedling of which they will have planted in Joe's honor in front of the NAL building.

Keith Russell presents Joe with a framed copy of one of Joe's favorite photographs from NAL's Forest Service collection, "The Moonshiners," on behalf of the NAL Staff.

Dean Plowman, Acting Assistant Secretary, Science and Education, praised Joe Howard for his achievements, outlined the highlights of his career, and presented him with an award from the U. S. Department of Agriculture.

Emile Samaha, Director of Library and Docu-

mentation Systems Division, Food and Agriculture Organization of the United Nations, Rome, presented Joe with an inlaid Lebanese wooden box.

Ghislaine Poitevien, Executive Secretary, AIBDA (Inter-American Association of Agricultural Librarians and Documentalists), [Costa Rica], presents Joe with a set of hand-carved wooden bowls and serving utensils on behalf of AIBDA.



photos: J. Swab





## New Bibliographies

The bibliographies in the *Quick Bibliography* series are primarily computerized online as batch bibliographies emanating from searches performed by the NAL Public Services Division Staff in response to customer requests. Searches are selected for inclusion based on the currency of the topic, interest among clientele, and probable value to a larger audience. Since October 1988, all *QB's* include search strategies. Unless otherwise specified, citations are from AGRICOLA.

The other bibliographic series, including *Special Reference Briefs*, have been researched and produced to meet special needs of clientele of the Library and its Information Centers. Revisions or updates will be announced when produced. Only one copy of a requested title will be sent; however, requesters may make copies. To request a copy of a *Quick Bibliography*, *Special Reference Brief*, or other bibliographic work, circle the desired title(s) below and send your request with a self-addressed label to:

Reference Branch, Room 100  
National Agricultural Library  
10301 Baltimore Boulevard  
Beltsville, MD 20705-2351

## Quick Bibliographies

**Q.B.—94-01.** Poverty in Rural America, January 1980-June 1993. 219 citations in English. Prepared by Patricia La Caille John. Rural Information Center. December 1993. Updates Q.B. 91-123.

**Q.B.—94-02.** Transportation Services in Rural Areas, January 1980-June 1993. 209 citations in English. Prepared by Patricia La Caille John. Rural Information Center. December 1993. Updates Q.B. 91-124.

**Q.B.—94-03.** Agricultural Education (Post Secondary): Teaching Materials, Methods, and Curricula, January 1990-March 1994. About 250 citations in English. Prepared by Patricia A. Krug. Reference and User Services Branch. May 1994.

**Q.B.—94-04.** Welfare of Experimental Animals, January 1990-November 1993. 322 citations in English. Prepared by Tim Allen. Animal Welfare Information Center. February 1994. Updates Q.B. 91-83.

**Q.B.—94-05.** Bioassessment of Water Resources, January 1985-December 1993. 133 citations; languages: none excluded. Prepared by Joe Makuch and Bonnie Emmert. Water Quality Information Center. February 1994.

**Q.B. 94—06.** Simulation Models, GIS and Nonpoint Source Pollution, January 1991-December 1993. 337 citations; languages: none excluded. Prepared by Joe Makuch and Bonnie Emmert. Water Quality Information Center. February 1994. Updates Q.B. 92-69.

**Q.B. 94—07.** Tilapia Culture, January 1988-November 1993. 42 citations; languages: none excluded. Prepared by Michelle Rezeau. Aquaculture Information Center. February 1994. Updates Q.B. 91-48.

**Q.B. 94—08.** Health Care in Rural America, January 1988-September 1993. 323 citations in English. Prepared by Patricia La Caille John. Rural Information Center. February 1994. Updates Q.B. 92-13.

**Q.B. 94—09.** Crime in Rural America, January 1979-October 1993. 91 citations in English. Prepared by

Patricia La Caille John. Rural Information Center. February 1994. Updates Q.B. 92-21.

**Q.B. 94—10.** BST - Bovine Growth Hormone, January 1991-December 1993. 281 citations; languages: none excluded. Prepared by Jean A. Larson. Animal Welfare Information Center. February 1994. Updates Q.B. 92-30.

**Q.B. 94—11.** Agriculture and Trade Policy in Latin America, January 1985-February 1994. 91 citations; languages: none excluded. Prepared by Mary E. Lassanyi. Agricultural Trade and Marketing Information Center. February 1994. Updates Q.B. 92-07.

**Q.B. 94—12.** IPM and Biological Control of Plant Pests: Horticultural Crops, January 1992-December 1993. 285 citations in English. Prepared by Jane Potter Gates. Alternative Farming Systems Information Center. March 1994. Updates Q.B. 92-41.

**Q.B. 94—13.** Conservation Tillage, January 1991-December 1993. 338 citations in English. Prepared by Jane Potter Gates. Alternative Farming Systems Information Center. March 1994. Updates Q.B. 92-02.

**Q.B. 94—14.** Housing, Husbandry, and Welfare of Swine, January 1991-January 1994. 244 citations; languages: none excluded. Prepared by Tim Allen. Animal Welfare Information Center. March 1994.

**Q.B. 94—15.** Housing, Husbandry, and Welfare of Poultry, January 1991-January 1994. 311 citations in English. Prepared by Michael D. Kreger. Animal Welfare Information Center. March 1994. Updates Q.B. 91-01, 91-02, and 91-03.

**Q.B. 94—16.** Housing, Husbandry, and Welfare of Rabbits, January 1979-January 1994. 213 citations; languages: none excluded. Prepared by Tim Allen. Animal Welfare Information Center. March 1994.

**Q.B. 94—17.** Training Material for Animal Facility Personnel, January 1989-January 1994. 219 citations in English. Prepared by Tim Allen.



Animal Welfare Information Center. March 1994. Updates Q.B. 91-07.

**Q.B. 94-18.** Anesthesia and Analgesia for Companion and Laboratory Animals, January 1988-January 1994. 311 citations in English. Prepared by Tim Allen. Animal Welfare Information Center. March 1994.

## Special Reference Briefs

**SRB-94-01.** Animal Models in Biomedical Research: Swine. Prepared by Cynthia Petrie Smith. Animal Welfare Information Center. December 1993. Updates Q.B. 91-06. 118p.

**SRB-94-02.** Guide to Historical Research at the National Agricultural Library: The General Collection. Prepared by Susan Chapman. Reference and User Services Branch.

February 1994. 92p.

**SRB-94-03.** Cultural Perspectives on Food and Nutrition. Prepared by Marcy Schveibinz. Food and Nutrition Information Center. March 1994. Updates SRB 92-11. 72p.

## Miscellaneous

Educational and Training Opportunities in Sustainable Agriculture. 6th Edition. Prepared by Jane Potter Gates. Alternative Farming Systems Information Center. December 1993. 31p.

Food and Nutrition Information Center Microcomputer Software Collection. Prepared by Natalie Updegrave Partridge. Food and Nutrition Information Center. December 1993. Updates December 1992 edition. 72p.

*BioChromatography.* Natick, MA: Eaton Pub. Co. Bimonthly (except Jul./Aug.) Vol. 1, no. 1 (May/June 1986)-

**QP519.9.C47B56**

*Biological Signals.* Basel, Switzerland; New York: S. Karger. Bimonthly. 1/1 (Jan.-Feb. 1992)-

**QP517.C45B56**

*The Bloomin' Texan / Texas State Florists' Association.* Austin: The Association. Monthly (except for July). Description based on: Vol. 21, no. 4 (Apr. 1992)

**SB443.35.T4B66**

*Boletim informativo da Sociedade Brasileira de Ciência do Solo.* Campinas, SP [Brazil]: Secretaria Executiva, Sociedade Brasileira de Ciência do Solo. Three times a year. Description based on: Vol. 15 no. 3 (set./dez. 1990)

**S590.B67**

*Buletin ilmu peternakan dan perikanan.* Ujung Pandang: Fakultas Peternakan Universitas Hasanuddin. Three no. a year. Ed. 1 (Des. 1990)-

**SF604.B85**

*Buletin penelitian tanaman industri.* Bogor: Pusat Penelitian dan Pengembangan Tanaman Industri. Two no. a year. Began in 1990.

**SB108.I5B85**

*Chiba Daigaku Shinkaku Biseibutsu Kenkyu Senta hokoku = Annual Report of Research Center for Pathogenic Fungi and Microbial Toxicoses, Chiba University.* Chiba-ken Chiba-shi: Do Senta. Annual. Dai 1-kan (Showa 62-nendo [1987])-

**QR245.C45**

*Ecological Engineering.* Amsterdam; New York: Elsevier Science. Four no. a year. Vol. 1, no. 1/2 (Mar. 1992)-

**TD1.E26**

*FAO/FIAC Information Notes.* Rome, Italy: FAO/Fertilizer Industry Advisory Committee. No. 1 (July 1984)-

**HD9483.D44F35**



## New Serials Received at NAL

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The National Agricultural Library will provide the following surplus publications to any interested organization that regularly sends free publications to NAL, including most Federal, land-grant, and agricultural research institutions, and foreign exchange partners. Titles not requested will be purged six months after the initial listing.

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*American Society for Horticultural Science*. Proceedings. Vols. 71-76, 81-93.

*American Journal of Botany*. Vols. 47-48, 63-67.

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*Physiologia Plantarum*. Vols. 21-23.

**Advisory Committee Meeting.** Annapolis, Maryland. Contact: Lynne Canter, 410-841-5724; Fax: 410-841-5987.

**May 12: Biotechnology and Food: A Public Issue For Extension Education (nationwide video conference).** Contact: Gene Schriefer, University of Wisconsin-Madison, 608-262-8065.

**May 12-13: NRECA Territorial Integrity Conference.** Minneapolis, MN; Marquette. Contact: 202-857-9649.

**May 13-15: "Clinical Social Work in the 21st Century: Creative Responses to Critical Issues."** 2nd National Clinical Social Work Conference. Washington, DC. Contact: Helen White, 703-522-7237.

**May 13-18: Medical Library Association 94th Annual Meeting.** San Antonio, TX. Contact: 312-419-9094.

**May 14-15: American School Food Service Association Major Cities Meeting.** Chicago, IL. Contact: Jim O'Donnell, 703-305-2626.

**May 14-17: Eighth National Conference on Business Incubation.** Buffalo, NY. Contact: 614-593-4331.

**May 14-18: National Restaurant Association, Annual Convention and Show.** Chicago, IL. Contact: 800-424-5156.

**May 15-18: "Racing Toward the Future."** Nat'l Extension Technology Conference. Lexington, KY; Radisson Plaza Hotel. Contact: Lee Meyer (lmeyer@ca.uky.edu) or Toni Powell (tonilib@ukcc.uky.edu) or Bob DeMattina, 606-257-4953.

**May 16-18: "Building a Lead-Safe Future."** Alliance to End Childhood Lead Poisoning 2nd Comprehensive National Conference. Washington, DC. Contact: 202-543-1147.

**May 16-19: "Rural Health Partners for Change."** 10th Annual Dakota Conference on Rural and Public Health. Fargo, ND. Contact: 701-777-3848.

**May 16-19: Western Regional Solid Waste Symposium.** Solid Waste Association of North America. South Lake Tahoe, NV; Horizon Hotel. Contact: (about sessions) Steve Maguin, 310-699-7411; (exhibiting) Scott Ramey, 310-404-1705.

**May 16-20: "Adolescence and the Media."** 26th Annual Meeting of the Society for Adolescent Medicine. Los Angeles, CA. Contact: Society of Adolescent Medicine, 816-795-8336.

**May 16-20: Recombinant DNA:**



## Agriculture Datebook

Meetings included in this list are selected from USDA's *Ag Calendar*, information provided by NAL information centers, federal and state agencies, associations, & interest groups. Items are listed only once, as soon as practical after receipt. Inclusion does not constitute endorsement by NAL or USDA

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**May 9-10: 12th Annual Biotechnology Patent Conference.** Arlington, VA; The Ritz Carlton Pentagon City Hotel. Contact: 301-881-2600, Fax: (301) 231-5826, TELEX: 958 768 ATCCROV.

**May 9-13: Eighteenth Annual Assoc. of State Floodplain Managers Conference.** Tulsa, OK. Contact: GA Env. Protection Div., Floodplain Mgmt. Office, 404-656-6382.

**May 12: Maryland Aquaculture**

**Techniques & Applications Workshop.** Rockville, MD. Contact: 301-881-2600; Fax: 301-231-5826; TELEX: 958 768 ATCCROV.

**May 16-21: Second USA/CIS Joint Conf. on Environmental Hydrology and Hydrogeology.** Washington, DC; Hyatt Regency Crystal Hotel. Contact: 612-379-1030; Fax: 612-379-0169.

**May 17: Latin American Seafood Conference.** Fort Lauderdale, FL. Contact: Sea Fare Expos, 206-547-6030; Fax: 206-548-9346.

**May 17-18: "Rural Health: Navigating Transition." 7th Annual Northwest Regional Rural Health Conference.** Spokane, WA. Contact: 509-456-3154.

**May 17-19: Australian Irrigation Expo and Conference '94.** Rosehill, Sydney, Australia; S.T.C. Function Centre. Contact: Peter Garrard, Irrigation Assn. of Australia, Box 166, Homebush, NSW 2140; Phone: (61) +2 746 0531; Fax: (61) +2 764 2331.

**May 19-20: The Global Dimensions of Lead Poisoning. First International Conference.** Washington, DC. Contact: 227 Massachusetts Ave., NE, Suite 200, Washington, DC 20002.

**May 19-20: Ninth Annual Commitment to Wellness Conference.** Canton, OH. Contact: 216-478-8277.

**May 19-21: Pollen-Pistil Interactions, 9th Annual Penn State Symposium in Plant Physiology.** University Park, PA. Contact: Andrew Stephenson, Fax: 814-865-9131; EMAIL: as4@psuvm.psu.edu.

**May 19-22: American Geriatrics Society 51st Annual Meeting.** Los Angeles, CA. Contact: 212-308-1414.

**May 19-22: American Society on Aging 40th Annual Meeting.** San Francisco, CA. Contact: 415-974-9615.

**May 20-22: "Abilities Expo." Easter Seal Society.** Anaheim, CA. Contact: 203-374-1411, ext. 138.

**May 21-23: Community Transportation Assistance Project Training Conferences.** Sacramento, CA. Contact: 800-527-8279.

**May 21-23: IUFR Working Party on Molecular Genetics of Forest Trees.** Scarborough, ME. Contact: Keith Hutchison, 207-581-2827; Email: keithh@maine.maine.edu; Fax: 207-581-2801.

**May 21-25: American Society for Biochemistry and Molecular Biology.**

Washington, DC. Contact: 301-530-7010; Fax: 301-530-7014.

**May 21-June 3: Biotechnology and Agriculture Improvement In Developing Countries (theoretical course).** Marrakech, Morocco. Contact: Dr. Z. Abdelouahhab, Dept of Biology, Faculty of Sciences, B.P.S. 15 Marrakech, Morocco; Phone: +212-4-434649; Fax: +212-4-436769.

**May 22-24: Nat'l Agricultural Biotechnology Council's 6th Annual Meeting.** East Lansing, Michigan; Michigan State University. Contact: 607-254-4856.

**May 22-27: BIO International 8th Annual Biotechnology Meeting & Expo and 6th Annual Council of Biotechnology Centers Meeting.** Toronto, Canada. Contact: 202-857-0244; Fax: 202-857-0237.

**May 23-24: NABC 6, Agricultural Biotechnology and the Public Good. The Sixth Annual Meeting of the National Agricultural Biotechnology Council.** East Lansing, MI; Michigan State University. Contact: NABC News, 517-355-0123; E-mail: 18215emh@ibm.cl.msu.edu; Fax: 517-353-5406.

**May 23-26: Practical Methods for Assessment and Remediation of Hydrocarbon Spills.** San Diego, CA. Contact: 800-926-5923.

**May 23-27: BIO International, 8th Annual Biotechnology Meeting and Expo.** Toronto, Canada. Contact: 202-857-0244; Fax: 202-857-0237.

**May 24-27: Polymerase Chain Reaction (DNA Sequencing PCR) Applications/Cycle Workshop.** Columbia, MD. Contact: 301-730-3984; Fax: 301-730-3983.

**May 25-28: "Building Bridges—Leading the Way." 17th Annual National Conf. on Rural Health.** San Francisco, CA. Contact: 816-756-3140.

**May 25-28: Fifth Gatlinburg Symposium: Technology Transfer of Plant Biotechnology.** Knoxville, TN. Contact: UT Conferences, 615-974-0250; Fax: 615-974-0264.

**May 25-June 3: Environmental Biotechnology, Advanced Course.** Delft, Netherlands. Contact: I.L.A. van der Meer-Lerk, Institute for Biotechnology Studies, Delft Leiden, Kluyver Laboratory, Julianalaan 67, Delft, 2628 BC, Netherlands; Phone: 31 (15) 785 140; Fax: 31 (15) 782 355.

**May 26-28: American Cotton Shippers Association.** San Francisco, CA; Ritz-Carlton. Contact: William May, 1-800-238-7192.

**May 27-June 5: Course on Crystallography of Molecular Biology.** Erice, Italy. Contact: Dip. di Scienze Mineralogiche, L. Riva di Sanseverino, Piazza Porta San Donato 1, 40126 Bologna, Italy; Phone: (39 51) 243556; Fax: (39 51) 243336; TELEX: 511650.

**May 29-June 1: Nutrition and Metabolism in Renal Disease.** Stockholm, Sweden. Contact: PO Box 6911, S-10239 Stockholm, Sweden; Phone: (46) 8 736 1500; Fax: (46) 8 34 84 41.

**June 1-3: Biosensors: 3rd World Congress.** New Orleans, LA. Contact: Kay Russell, Elsevier Advanced Technology, Mayfield House, 256 Banbury Road, Oxford OX2 7DH, UK; Phone: 1:44 (0865) 512243; Fax: 44 (0865) 310981).

**June 1-4: Funding Our Future.** Indianapolis, IN; Ramada Plaza. Contact: Pat Peay, 1-800-999-6262.

**June 4: National Trails Day Celebration.** Contact: National Park Day, American Hikers Society, Box 20160, Washington, DC 20041-2160.

**June 1-7: Ucharest International Fair for Consumer Goods.** Bucharest, Romania. Contact: Pam Green, 202-482-4915; Fax: 202-482-4505.

**June 4-7: 1994 Congress on Cell and Tissue Culture Regulation of Cell and Tissue Differentiation.** Research Triangle Park, NC. Contact: Marietta Ellis, 410-992-0946; Fax: 410-992-0949.

**June 5-10: Recombinant DNA Technology.** Bloomington, IN. Contact: Jane Clay, 812-855-6329; Fax: 812-855-8997.

**June 6-8: Virulence Mechanisms of Bacterial Pathogens.** Ames, IA; Iowa State Univ. Contact: Jane Galyon, 515-294-1850; Fax: 512-294-8500.

**June 6-10: Plant Tissue Culture Workshop.** Columbia, MD. Contact: 301-730-3984; Fax: 301-730-3983.

**June 8-10: Corn Utilization Conference.** St. Louis, MO; Hyatt Union Station. Contact: Mike Erker, 314-275-9915.

**June 8-10: Second Annual PCR Applications, Alternative Technologies & New Techniques.** San Francisco, CA. Contact: Cambridge Healthtech, 617-487-7989; Fax: 617-487-7937.

**June 10-13: Fisch International**



and Seafood Europe '94. Bremen, Germany. Fax: 49421321485.

**June 11-16: Special Libraries Association - 85th Annual Conference.** Atlanta, GA. Contact: SLA, 1700 18th Street, N.W., Washington, DC 20009; 202-234-4700; Fax: 202-265-9317.

**June 12-17: 8th International Congress on Plant Tissue and Cell Culture.** Florence, Italy. Contact: Ms. O. Scaramuzzi, 8th IAPTC Congress, Viale G Milton 81, Florence, I-50129, Italy; Fax: 055-476393.

**June 12-17: Poznan International Fair.** Poznan, Poland. Contact: Dan Chambers, D.C. Commerce International, Ltd., 3021 South Hill Street, Arlington, VA 22202; 703-549-9797; Fax: 703-838-0008.

**June 12-17: Techniques in Molecular Biology: DNA Sequencing and RFLP Analysis Workshop.** Bloomington, IN. Contact: Jane Clay, 812-855-6329; Fax: 812-855-8997.

**June 12-18: Science and Technology for the 21st Century Meeting the Needs of the Global Community.** Baltimore, MD. Contact: 202-328-6555.

**June 13: GMA Executive Conference.** White Sulphur Springs, West VA; Greenbrier Hotel. Contact: 202-720-7711.

**June 16-18: FIA MEXICO'94.** American Feed Industry Association's biennial exposition for feed-related machinery, macro and micro ingredients, raw materials, and related end products. Guadalajara, Mexico. Contact: 818-340-8864; Fax: 818-340-7017.

**June 18-21: Gamma Sigma Delta Honor Society of Agriculture 1994 Biennial Conclave.** Kansas State University, Manhattan. Contact: Carole Makelal, 303-491-5141; Fax: 303-491-4855.

**June 19-22: Computer User's Conference.** Jackson Hole, WY; Snow King Resort. Contact: 202-857-9649.

**June 19-22: Engineering for Sustainable Development (American Society of Agricultural Engineers International Summer Meeting).** Kansas City, MO. Contact: ASAE, 616-429-0300; Fax: 616-429-3852.

**June 19-22: Tenth Annual Meeting of the Internat'l Society of Technology Assessment in Health Care.** Baltimore, MD. Contact: 202-371-1887.

**June 19-23: "The Meeting of the Waters: Communities at Work."** As-

sociation of Living Historical Farms and Agricultural Museums. Troy, NY; Russell Sage College. Contact: Eric Paige, 607-547-2586.

**June 19-23: With Genes Decently - 1st European Congress on Genetic Ethics.** Turku, Finland. Contact: University of Turku, Centre for Extension Studies, SF-20500 Turku, Finland; Phone: (21) 633-6342; Fax: (21) 633-6220.

**June 19-24: Fourth International Congress of Plant Molecular Biology.** Amsterdam, The Netherlands. Contact: Congress Secretariat, 4th International Congress of Plant Molecular Biology, c/o RAI Organisatie Bureau Amsterdam bv, Europaplein 12, 1078 GZ Amsterdam, The Netherlands. Phone: +31 (0) 20 549 1212; Fax: +31 (0) 20 646 4469; Telex: 13499 raico nl.

**June 19-24: International Aquaculture Technology Symposium on Alternative Sources of Energy for Aqua Systems in Fish Farming.** University of Nations. Hawaii. Contact: Heinz Schoenhoff, 808-326-4455; Fax: 808-329-2387.

**June 19-25: Genetics in Aquaculture: Fifth International Symposium.** Halifax, Nova Scotia. Contact: Pamela Gaines, 902-494-1398; Fax: 902-494-3736.

**June 20-24: International Conference on Ecology and Environment.** Drake Bay, Peninsula de Osa, Costa Rica, Central America. Contact: Guillermo Guzman, E-mail:gguzman@ucrmv2.ucr.cr, or Elizabeth Arnaez, Department of Biology, Costa Rica Institute of Technology, P.O. Box 159, Cartago, Costa Rica, Central America, E-mail:earnaez@ucrmv2.

**June 21: Increasing Parent Involvement in Education Goals.** 2000 Satellite Town Meeting, US Dept. of Education. Contact: (USDED) 1-800-USA-LEARN.

**June 21-24: Hybridoma Technology & Monoclonal Antibody Product Development Workshop.** Rockville, MD. Contact: 301-881-2600; Fax: 301-231-5826; Telex: 958 768 ATCCROV.

**June 21-26: 4th International Congress of Plant Molecular Biology.** Amsterdam, The Netherlands. Contact: Congress Secretariat, c/o RAI Organisatie Bureau Amsterdam bv, Europaplein 12, 1078 GZ Amsterdam, The Netherlands. Phone: +31 (0)20

549 1212; Fax: +31 (0)20 646 4469; Telex: 13499 raico nl.

**June 22-26: 1994 Taipei Internat'l Food Industry Show.** Taipei World Trade Center Exhibition Hall. Contact: Steven Yoder or Margaret Thursday, American Institute in Taiwan, Agricultural Trade Office; 2F, 54 Nan Hai Road, Taipei, Taiwan; Phone: 886-2-305-4883; Fax: 886-2-305-7073.

**June 22-26: 9th International Interdisciplinary Conference on Hypertension in Blacks.** Atlanta, GA. Contact: Josephine Jamison, 404-875-6263.

**June 22-26: Sustaining the Earth Summit: Planting a New Vision of Sustainable Agriculture.** Minneapolis, MN. Contact: International Alliance for Sustainable Agriculture, 612-331-1099; Fax: 612-379-1527.

**June 25-28: United Fresh Fruit and Vegetable Annual Produce Conference.** Santa Barbara, CA. Contact: FMI, 202-452-8444.

**June 26-29: Effects of Human-Induced Changes on Hydrologic Systems.** Jackson Hole, WY. Contact: Victor Hasfurther, 307-766-2963.

**June 26-29: "Population and the Quality of Life: A Dialogue on Values." 21st Annual International Health Conference.** National Council for International Health. Arlington, VA. Contact: 202-833-0075.

**June 26-July 1: 11th International Meeting on Plant Lipids.** Paris, France. Contact: Jean-Claude Kader, Plant Cell and Molecular Physiology Group, Universite Paris 6, Tour 53, Case 154, 4 place Jussieu, 75005 Paris, France. Fax: 33-1-44-27-61-51.

**June 26-July 1: 7th International Symposium on Molecular Plant-Microbe Interactions.** Edinburgh, Scotland, UK. Contact: M.J. Daniels, John Innes Centre, Sainsbury Laboratory, Colney Lane, Norwich, East Anglia NR4 7UH, UK; Phone: (0603)52571; Fax: (0603)250024.

**June 26-July 1: 7th International Symposium on the Genetics of Industrial Microorganisms.** Ottawa, Ontario, Canada. Contact: National Research Council Canada, Ottawa, Ontario K1A 0R6, Canada; 613-993-9431; FAX: 613-957-9828.

**June 28-29: International Symposium on Table Grape Production.** Anaheim, CA. Contact: Nick Dokoozlian, 209-891-2500; Fax: 209-891-2593.



photos: J. Swab

(Above L-R) Secretary of Agriculture Mike Espy examines items from NAL's Special Collections with curator Alan Fusonie and NAL Director Joseph H. Howard. See also pages 25 and 38. (Above right) Joe Howard cuts cake at his retirement reception with his wife Pat and two grandchildren at his side. See also pages 1-2, and 38-41 of this issue of ALIN.



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